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The "Young Naturalist" Series of Illustrated Hand-Books
on British Natural History,

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Text Form.

HANDBOOK I,

ON

BRITISH BIRDS; THEIR
NESTS AND EGGS,

WITH HAND-COLOURED FIGURES OF

EVERY SPECIES & ITS VARIETIES.

By S. L. MOSLEY,

WITH TEXT REVISED AND CORRECTED

BY A FELLOW OF THE ZOOLOGICAL SOCIETY

TO BE HAD OF

S. L. MOSLEY, BEAUMONT PARK, HUDDERSFIELD, OF

JOHN E. ROBSON, BELLERBY TERRACE, WEST HARTLEPOOL.



1861 2-18

the 1990s, the number of people in the UK who are employed in the public sector has increased by 1.5 million (1990–1999) and the number of people in the private sector has increased by 1.7 million (1990–1999).

There is a growing emphasis on the need to improve the quality of care and services provided by the public sector. This has led to a number of initiatives, including the introduction of the Health Care Act 1999, the introduction of the NHS Constitution, and the introduction of the NHS Performance Framework. These initiatives have led to a number of changes in the way that the public sector is run, including the introduction of new management practices, the introduction of new financial controls, and the introduction of new performance measures.

One of the key challenges facing the public sector is the need to improve the quality of care and services provided. This is a complex task, as it involves a number of different factors, including the quality of the staff, the quality of the facilities, and the quality of the services. There are a number of ways in which the quality of care and services can be improved, including the introduction of new management practices, the introduction of new financial controls, and the introduction of new performance measures.

Another key challenge facing the public sector is the need to improve the efficiency of the services provided. This is a complex task, as it involves a number of different factors, including the cost of the services, the time taken to provide the services, and the quality of the services. There are a number of ways in which the efficiency of the services can be improved, including the introduction of new management practices, the introduction of new financial controls, and the introduction of new performance measures.

A third key challenge facing the public sector is the need to improve the accessibility of the services provided. This is a complex task, as it involves a number of different factors, including the location of the services, the hours of operation, and the quality of the services. There are a number of ways in which the accessibility of the services can be improved, including the introduction of new management practices, the introduction of new financial controls, and the introduction of new performance measures.

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THE "YOUNG NATURALIST" SERIES OF
ILLUSTRATED HAND-BOOKS ON BRITISH NATURAL HISTORY.

A HISTORY
OF
BRITISH BIRDS, THEIR
NESTS, AND EGGS.

WITH HAND-COLOURED FIGURES OF
ALL THE SPECIES AND VARIETIES,

By S. L. MOSLEY,
WITH TEXT REVISED
BY A FELLOW OF THE ZOOLOGICAL SOCIETY.

VOL. I.
INDIGENOUS LAND BIRDS.

[CHEAP EDITION.]

HUDDERSFIELD:
S. L. MOSLEY, BEAUMONT PARK MUSEUM.

1884.

PREFACE TO VOLUME I.

—:O:—

Owing to circumstances over which I have had little control, the parts of the present volume have not appeared as regularly as I could have wished. Although I should much prefer that they should appeared punctually, and shall endeavour to let them do so in future, yet accuracy is of much greater importance and it is gratifying that the plates, more especially those of the Superior Edition, have received the highest praise.

All the plates of this volume have been drawn and coloured by myself; hitherto I have been unable to meet with talent that could do them sufficiently well, and at the price at which they are published, but I hope, during the progress of the next volume, that my own daughter will be able to render material assistance.

I have to return my sincere thanks to Mrs. Battersby, Miss Ruth Prescott-Decie, Miss Angilina Kerry, Messrs F. Kerry, C. A. Marriott, G. T. Porritt, F.I.S., and J. Davis for having most kindly assisted me by sending specimens from which figures have been taken. I am particularly pleased to have received so much assistance from ladies; I have always held the opinion that Natural History is a study well suited to their requirements, and calculated to save many from a life of idleness to which by fashion some are forcibly subjected.

Since the plates were drawn I have obtained figures of striking varieties of some of the species; these, along with others which may subsequently occur, will be published at the end of the work.

For the next volume I have sketches of nearly 200 beautiful and extreme varieties, from specimens in the possession of Mr. J. Whitaker, F.Z.S., Mr. F. Bond, F.Z.S., and other well known ornithologists who have very kindly placed their collections at my disposal. I still want figures of things which have not before been figured in most works on ornithology, particularly varieties, and young of game and water birds in the downy state.

S. L. Mosley.

Beaumont Park, July 1884.

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WHITE-TAILED EAGLE.

BRITISH BIRDS; THEIR NESTS AND EGGS.

DESCRIPTION OF PARTS.

Birds are so well known that it need not be feared that any person will mistake any other animal for a bird, or a bird for any other animal, but there are certain parts of a bird which are known by technical terms which would be unintelligible to the general reader if not explained. The beak is composed of two parts, called the upper and lower *mandibles*, the upper one being frequently, especially in the birds of prey, clothed at the base with a soft leathery substance called the *cere*, in which the nostrils are placed. In giving the color of eyes the *iris* is always intended being the colored portion, which surrounds the black central *pupil*. The wing bone is composed of three parts, joined together; the first, or tip joint, carries the large pinion feathers, usually ten in number, and called the *primaries*. The second joint carries a series of shorter and softer feathers, called the *secondaries*, which vary in different species. Between these and the body is a group of feathers which varies greatly in size in different species, called the *tertiaries*. The primaries and secondaries are covered at the base by, first the *greater wing coverts*, and then by the *lesser wing coverts*, the latter being laid in regular scale-like fashion along the bones of the wing. Under the wing is a series of feathers called the *under wing coverts*. At the tip of the wing is a kind of small thumb, or finger, usually called the

spurious wing, and has a few stiff feathers, probably to protect the bases of the large quill feathers. The tail is generally composed of twelve feathers, the base being clothed above and below by the *upper* and *under-tail coverts*. The legs will be described as *thigh* (above the knee), *tarsus* (below the knee), *toes*, and *claws*, the latter being the horny appendages at the extremities of the toes, and generally called *talons* in birds of prey. By the above explanations it is hoped the reader will be able to understand the few technicalities that will be made use of during the progress of this work.

Birds were divided by the late Mr. Yarrell into five great orders, according to their different modes of life, and as these Orders seem to be natural divisions they will be taken as the ground-work of our classification. They are as follows :—

- I. RAPTORES.....Birds of prey.
- II. INSESSORES Perchers.
- III. RASORES Scratchers.
- IV. GALLATORES ...Waders.
- V. NATATORES Swimmers.

Each of these Orders are again subdivided into families, the families into genera, and the genera into species. The characters of these will be described in turn during the progress of the work,

Order I.—Raptores.

RAPTORES.—*Raptor* (Lat.), robber. From their habit of preying upon other animals.

The members of this order are characterized by having the lower mandible short and blunt, and the upper one pointed, and bend downward over the end of the lower one. The claws are long and powerful, and much incurved. The birds are very strong on the wing, and live upon the flesh of other

animals, which they capture mostly by chase. They live singly, or in pairs, two pairs seldom breeding near each other. The female is generally larger than the male, and the eggs are often of a rounded form, being nearly of equal thickness at both ends. The young birds are at first clothed with a soft down, and remain in the nest until they are able to fly.

FAMILY I.—FALCONIDÆ. Leach.

FALCONIDÆ.—*Falco*, the Latin name for a Falcon. The termination of this word, and of the names of other families which are to follow, means that the birds in that particular family bear one general family likeness, as if they were descendants from a common ancestor.

The members of this family vary greatly in size, as will be seen from the measurements of the different birds. The wing is large, and

the pinion feathers hard, and adapted for quick strong flight. The legs (with two exceptions) are not clothed with feathers below the knee joint. They have three toes before and one behind, the hind one being as long as the outer ones. The nest is placed either on the ledge of some cliff, or in a tree, is very slightly put together, and the eggs are white or grey, with or without more or less red or brown spots or blotches.

Genus 1,—*Haliaetus*, Selby.

HALIAETUS.—*Halios* (Gr.) Marine, *aítos* (Gr.) an eagle.

The only representative of this genus in Britain is large, the beak large and powerful,

and the legs and feet clothed in front with large rough scales. It is separated from the next genus, because it seems, from its habits, to come nearer to the vultures.

1. WHITE-TAILED EAGLE.

Haliaeetus albicilla, Gmel.

Sea Eagle (America).

Erne (Gaelic).

Hafs örn (Sweden).

Goastern (Lapland).

ALBICILLA.—*Albus* (L.) white, *cilla* (L.) a tail.

Size.—An average adult male of this fine species measures rather under three feet from bill to tip of tail, and about seven feet in expanse of wings. Young birds are under this measurement, and adult females are even larger.

Plumage.—Few birds of prey differ more than this one in the plumage according to their age. THE ADULT MALE has the bill straw color; cere yellow; eye bright yellow. The whole of the head and neck is covered with long pointed feathers, whitish brown in color, with darker shafts; the back and breast are brown, each feather margined with paler color. The large primary wing feathers are black, with white shafts. The secondaries are paler. The tail, which is rather rounded at the extremity, is white, except at the base of the feathers which is brown. The legs and feet are pale yellow, clothed in front with large coarse scales; the claws are large and black. *The tarsi are not covered with feathers, as in the next species, at any period of the bird's existence.* IMMATURE birds vary according to their age, but about the second year the bill is bluish black, paler towards the base; cere yellow. The eye at this stage is chestnut brown. The head and neck is dull brown, the base of all the feathers being whitish. The breast has generally a few white feathers, which decrease in number as the bird advances in age. The rest of the body and tail is brown, the tail becoming whiter as the bird advances towards maturity. THE YOUNG are at first covered with a whitish or "murrey colored down" (Montague). They remain in the nest about two months before they are able to fly, which event is generally accomplished by the middle of August. VARIETIES have occurred pure

white; one is recorded as having been killed in Sutherlandshire, and another, probably from the same nest, was seen at the same time. Meyer records a variety which was in the collection of the Zoological Society. It had the base of all the feathers azure blue, which gave to the bird a very peculiar tint, being more conspicuous when it raised its feathers as in anger. This specimen, Mr. Bond informs us, is now in the Norwich Museum.

Note.—The note is described as a harsh and loud scream, uttered many times in succession, like the words—Kooluk, klook.

Flight.—The flight of the white-tailed eagle is somewhat heavy, flying along under the edge of some high sea cliff, and keeping a sharp look out for its prey. When travelling from one place to another its wings flap with a regular beat, while at other times it will ascend to a prodigious height, and soar in circles, two eagles not unfrequently performing their evolutions in company, and engaging in play or combat while at this great height. This bird very seldom alights on level ground, and when it does so it has some difficulty in rising again, flapping along the ground for some distance before it can acquire sufficient impetus to raise itself from the surface.

Food.—In its food this bird seems to approach somewhat to the Osprey, for fish, which it captures for itself, forms a moderate portion of its diet. Some writers state that it will not unfrequently attack the Osprey, and rob it of its acquired prey, and that sometimes the latter, in places where it is common, will unite to attack and drive away the larger intruder. Occasionally a White-tailed Eagle will seize a fish too large for it to lift

from the water, and in such a case the bird will spread its wings, and allow the wind to blow it with its prey to the shore. If, however, the wind is blowing off shore the bird is sometimes drowned, as it cannot liberate its claws. Other birds of prey have done the same. A vulture has been observed to do a similar thing on the body of a dead Indian on a river near Calcutta, Mr. Bond thinks this may be an accidental occurrence, and not an acquired habit. The White-tailed Eagle will also prey upon sea birds, guillemots, &c., as well as on land animals. It will also devour carrion, and gorge itself after the manner of the vultures, when it will sit upon a carcase, or something adjoining, and commence with drooping wings, after the manner of these birds. In the Hebrides, and other portions of Scotland, this bird in former years was very troublesome on account of the destruction it caused to sheep and other farm stock, and rewards were accordingly offered for its destruction. IN CONFINEMENT it may be fed upon flesh meat and fish, and should have plenty of room, and a pool of water.

Habitat.—This bird is more often met with than the Golden Eagle, frequently occurring along the northern shores of Scotland, the outer islands, and the north of Ireland. It is confined to the rocky parts of the coast, and

immature birds are sometimes met with at such places as Flambro' Head, the Cornwall coast, or the rabbit warrens of Norfolk and Suffolk. In fact immature birds have occurred in almost every southern county of England. ABROAD it is found in many parts of Europe, more commonly in the north, especially in Iceland and northern Russia. This species is also met with in Greenland, Spain, Sicily, Greece, in the Alutian Islands, Japan, and Manchuria. It breeds in Albania and in Egypt.

The Nest is large, and very roughly put together, being composed of sticks, seaweed, or heather. A slight depression is made in the centre, which is covered with some softer material, such as grass, wool, or feathers. It is generally placed on the ledge of a cliff, facing the sea, but sometimes in a situation near some inland lake. Sometimes the same site is used several years in succession.

Eggs.—Two eggs are laid, sometimes only one. In color they are white, or greyish-white, with or without a few rust-colored stains. Sometimes the spots are more numerous, and either dispersed equally over the egg, or confined to the large end. They are never so much spotted or marked as those of the Golden Eagle.



1 GOLDEN EAGLE. 2. WHITE-TAILED EAGLE.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.



GOLDEN EAGLE.

Genus II,—Aquila.

AQUILA.—The Latin word for Eagle.

Only one representative of this genus inhabits this country. It is of large size. The bill is not so large as in the last genus, its habits not so vulturine. It may at once be distinguished by the tarsus being clothed with feathers.

Another species having feathered tarsi has occurred in Britain, though very rarely; it may be distinguished by the wing coverts and the tertaries, each having a white spot at the tip. It is called the Spotted Eagle, and is smaller than our species.

2.—GOLDEN EAGLE.

Aquila cranietos, Linn.

Eryr Melyn (Ancient Britain).

CHRYSAETOS.—From *Chrysis* (Gr.), gold, and *aetos* (Gr.), an Eagle. So called from the golden color of the feathers on the neck of a mature bird.

Size.—Male, length about three feet from bill to tip of tail, and eight feet from tip to tip of expanded wings. The female is larger, specimens having been obtained which measured ten or eleven feet in expanse.

Plumage.—THE ADULT BIRD has the bill slate blue*; cere, bright yellow; eye reddish brown, the head and neck is covered with long-pointed feathers of a bright golden brown; rest of the body brown, darker on the back, the primary wing feathers inclining to blackish. The tail has the middle feathers the longest, and is bluish grey with two bands of lighter color. The legs are feathered down to the toes, by which it may at once be distinguished from the last species. Toes bright yellow. (Pl. 2, Fig. 1.)

IMMATURE birds of one or two years old have not the bright golden hue on the neck and nape; the eye is darker, and the tail has the upper part of the feathers white. In this

state of plumage it is often confounded with the young of the White-tailed Eagle, but they may at once be separated by the present species having feathered legs. (Pl. 2, Fig. 2.)

THE YOUNG are at first covered with a silvery down.

VARIETIES of this species have occurred pure white, but they, or indeed any striking varieties, are extremely rare.

Food.—The food of the Golden Eagle consists chiefly of such birds, as ducks, grouse, &c., and animals, such as fawns, hares, rabbits, and young lambs. Even sheep are sometimes attacked and killed. As many as 300 skeletons of ducks, and 40 of hares and rabbits are said to have been found about one of their nests in one of the German forests. This species like the rest of the family prefers to kill its own meat, only feeding upon carrion when forced to do so by hunger. The Golden Eagle is said, at times, to have taken up young children and carried them away to its eyrie or nest.

IN CONFINEMENT it should be fed upon raw fresh meat, or small living animals. It should be placed in a roomy compartment with some large dead branches for it to perch upon, otherwise it will soon lose much of its beauty of plumage.

Habitat.—In former times the Golden Eagle was not a rare bird in Britain, and up to the beginning of the present century, it used to breed not unfrequently in Cumber-

* There is an old superstition in the Highlands and perhaps elsewhere, that the Golden Eagle's longevity is owing to its power of casting and renewing its beak. In a communication to "Land and Water," from Mr. Frank Buckland, a quotation was made from an old falter, of date 1633, wherein the passage "Who satisfieth thy mouth with good things, so that thy youth is renewed like the eagle's," (Psalm CIII, 5,) was rendered.

"That fill'd with goodness thy desire,
And did prolong thy youth;
Like as the eagle casts her bill,
Whereby her age renew'eth."

land and Westmorland, and even in Derbyshire. Even now stray specimens are sometimes killed in England, several having been killed at Flamborough Head, and other places. In the south of England it is very rare, most of the so-called Golden Eagles killed in the south being the young of the white-tailed species. Its breeding haunts are, however, now confined to the Highlands of Scotland, and the wild parts of Ireland, and even there, like all other birds of prey, it is becoming scarcer every year. Game preserves and birds of prey do not go very well together.

ABROAD it may be met with in almost all parts of the Continent of Europe, especially along the Pyrenees, the Alps, in Russia, and the Scandinavian Mountains. It also inhabits the Himalaya, and other portions of Southern Asia, and the Rocky Mountains, and other parts of America. It is generally found about rugged mountain sides, being more of an inland bird than either the White-tailed Eagle or the Osprey.

The Nest is placed upon a ledge of some high cliff, rarely in trees, and not unfrequently in the vicinity of some inland loch. The materials used in its construction are chiefly sticks of various sizes, some of them being as thick as a man's wrist, with smaller ones, and sometimes a bit of coarse grass or heather for the lining. The quantity of material used is enormous, as much as two or three barrow loads being used in its con-

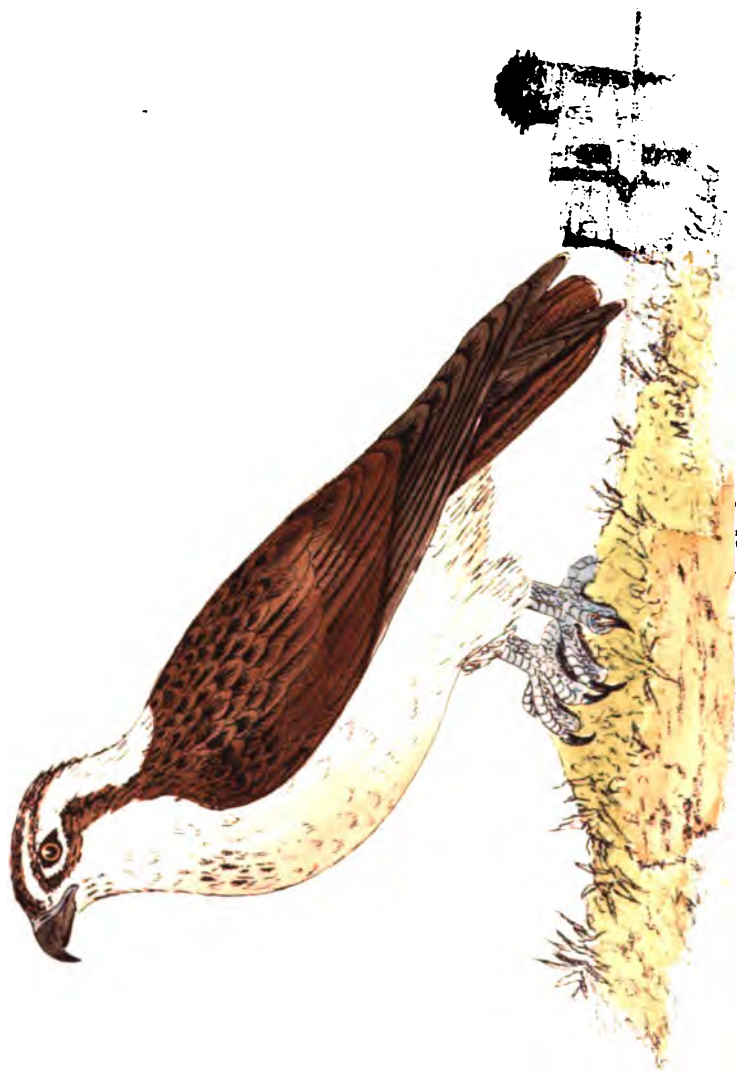
struction. The old birds generally return to the same site year after year if not disturbed. During incubation, and while the young are in the nest, it is strewn about with large quantities of provisions, and in times of scarcity men have been known to support their families for a considerable period by robbing the eagles of the food provided for their young.

Eggs.—Generally two eggs are laid, but sometimes there are three, and one case is mentioned in "*OOTHECA WOOLEYANA*" in which there were four. They are greyish white, more or less mottled in a very irregular manner with different shades of red-brown and dark grey (Pl. 2, Figs. 1 and 2). The eggs of young birds are much less marked than those laid by old birds. Some laid by *young birds* have been nearly covered with streaks and blotches. No doubt a great deal depends upon the age and health of the hen bird. The Golden Eagle is an early breeder, and the eggs should be sought about the middle of April; the young being hatched by the end of that month or beginning of May.

VARIETIES of the eggs of this species are sometimes met with, either pure white, or with the markings very few or faint. Sometimes also, as in others of the Falconidae, the markings are concentrated upon the small, rather than the large, end. At other times they are almost uniform brownish drab. This variety (Pl. 1, Fig. 1) is figured from a specimen taken in Ross-shire, on April 10th, 1860 and represented in "*OOTHECA WOOLEYANA*."



GOLDEN EAGLE.



OSPREY.

Genus III,—Pandion, Savigny.

PANDION.—"The Greek name of a hero changed into a bird of prey."—Morris.

Again, only one species of this genus inhabits Britain. In size it is less than the Eagles. The wings are large and rounded, the second and third quill feathers being the longest. The legs are short and thick and the tarsus

covered with rough scales. The toes are similarly clothed, and the under surface is set with pointed scales which assist in holding its slippery prey. The outer toe is longer than the inner ones, and can be turned sideways like that of the owl.

3. OSPREY.

Pandion haliaëtus, Linn.

Fish hawk, (America).

Mullet hawk, (S. of England).

Fish ljuse, (Sweden).

Tschiftscha, (Lapland).

Aquila plumba, (Italy).

Halasääski, (East Bothnia).

HALIAETUS.—*Halus* (Gr.) marine; *aiëtus* (Gr.) eagle.

Size.—Length of male about two feet, expanse a little over five feet. A female killed in Staffordshire by Mr. F. Bond, F.Z.S., on October 22nd, 1834, measured 6 ft. 7 in. from tip to tip.

Plumage.—The adult male has the bill bluish black; cere, blue grey; eye, yellow. In a specimen in Mr. James Varley's collection, of Huddersfield, from which the figure is taken, the upper part of the head, chin, and under parts of the body are white with a slight tint of yellow in places. Two brown lines pass from the bill to behind the head, where the feathers are elongated, and can in the living bird be raised at pleasure into a kind of crest. Back and wing coverts dark brown. The primaries are nearly black, and extend a little beyond the tail. The tail is barred above with two shades of brown, and underneath the bars are indicated by pale brown on a white ground. The legs are bluish, and are feathered in front slightly below the knee.

THE FEMALE is similar, but larger, and the white on the head not so clear.

IMMATURE birds have the bill black, and the whole of the plumage much variegated.

The feathers of the head are brown, margined with paler color, the nape not becoming clear white till the third or fourth year. Young birds vary a good deal in the markings of the upper parts.

Note.—When ascending in the air the Osprey is said to make a kind of crackling noise, which often develops into a scream when the bird is about to descend.

Flight.—The flight of this species is slow and heavy, yet easy. When it leaves its nest it generally sails off in a straight line for its fishing ground, where it wheels round in graceful evolutions, sometimes ascending to a great height. When it perceives a fish it rapidly descends, hence the Italian name *Aquila plumba* (Leaden Eagle). Occasionally it will check its course in mid-air, and hover like the Kestrel, no doubt this is when the fish has escaped from observation. Should the same fish, or another, again appear, the descent is continued, and the bird has often to plunge completely beneath the surface of the water in order to capture its prey. It emerges in a few seconds, and, shaking the water from its plumage, carries the captured fish to its nest, or to some tree, or rocky prominence to devour. The Osprey seldom alights on the ground, and when it

and one of the swiftest of all birds.

Migration.—The Osprey is a migrant bird, moving south and west in the autumn, and returning north and east in the spring. It breeds in the north of Europe, and in the north of the United States, and is found in the south of the latter country in the autumn of the year. In America it breeds in the north, and in the south of the United States, and is found in the south of the latter country in the autumn of the year. In America it breeds in the north, and in the south of the United States, and is found in the south of the latter country in the autumn of the year.

Food.—The food of this species appears to be exclusively fish, which it captures from either the sea or fresh-water. Some authors state that it will occasionally attack birds, such as water-fowl, but probably this is only when driven to do so by excessive hunger. The American fishermen had much pleasure in the appearance of the Osprey in the spring, as it served to denote the appearance of shoals of herring and other kinds of fish to which the bird serves them as a guide, and for this reason it is protected by common consent.

In construction it must be fed on fish, and must have a pool of water where it can wash.

Habitat.—In Britain the breeding haunts of the Osprey are confined to the Highlands of Scotland, and sparingly to some portions of Ireland. Formerly it used to breed on the coast of Devonshire. Stray specimens are occasionally killed in various parts of England. One is recorded in "White's Natural History of Selborne," and several others are mentioned in "Letters of Ruston."

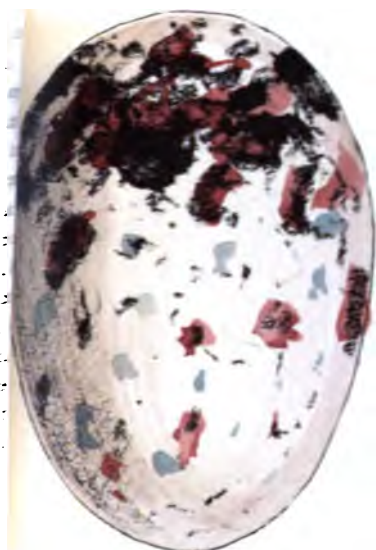
Around this bird may be found throughout Europe, and is also met with in Africa, and the northern portion of Asia. In North America it is a common species, in some places breeding in colonies, as many as thirty or forty pairs building their nest at the same place. This union is, no doubt, caused

partly by the attacks to which the Osprey is subjected from the White-headed Eagle, which is known to prey after it has captured it, and as the Osprey has been known to unite in numbers to drive eagles away, they probably may do so for that purpose.

Nest.—The nest of the Osprey is never far from some sheet of water, either the sea or in inland-lake. It is placed in a tree, on some dry pinnacle, or on the topmost part of some old deserted ruin. Most of the Highland Lochs have at one time or other been graced by the presence of an Osprey's nest. It is an early breeder, commencing to breed in March or the beginning of April. The nest is an immense pile of sticks, some of which are of considerable thickness, with softer material such as sea-weed, grass, or turf for the inside; unless the birds are disturbed the same nest is made use of year after year, and as it is repaired, and additions made to it every year, in time it becomes large enough for the materials to fill an ordinary sized cart. It is not unusual to find the nests of smaller birds built among the sticks which compose the Osprey's nest.

Eggs.—Three eggs are generally laid, and should be looked for during the latter half of May. They are of a yellowish white, more or less spotted with dark purplish brown, forming blotches, or a zone, or completely covering altogether the large end. Two of the figures (pl. iii, fig. 1 and 2) are taken from specimens received by a collector in this neighbourhood from the late J. H. Dunn, of Stromness.

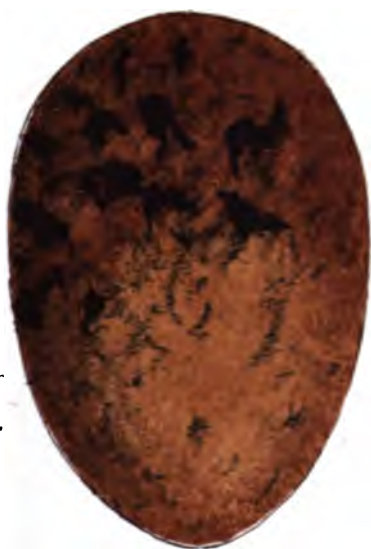
VARIETIES sometimes occur with the spot-color almost or entirely covering the ground, and the egg then appears of different shades of red-brown. Such a variety is admirably figured in "OOTHICA WOOLYANA," from a specimen taken in East Bothnia, in 1854, which I have taken the liberty to copy into this work (pl. iii, fig. 3). The eggs of this species are very variable.



1

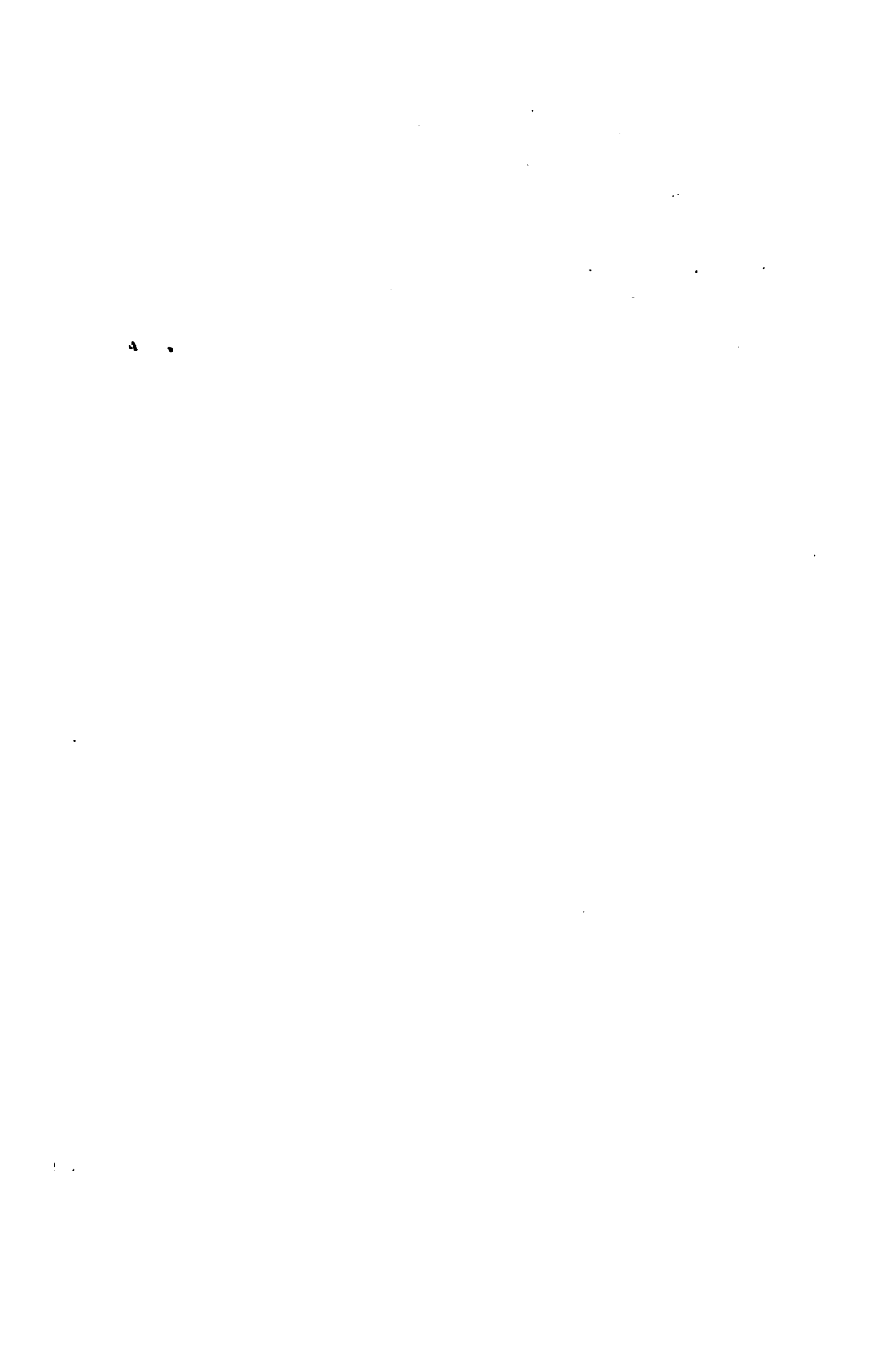


2



3

OSPREY.



does so, its movements are ungainly, on account of the shortness of its legs.

Migration.—The Osprey is a migratory bird, moving southward on the approach of winter, and returning northward in the spring to breed. In Britain it breeds in the north, and when specimens are obtained in the south it is generally in the autumn or winter. In America, where the bird is very common, they reach the coast of New York and New Jersey about the 21st of March, moving southward again about the 22nd of September.

Food.—The food of this species appears to be exclusively fish, which it captures from either the sea or fresh-water. Some authors state that it will occasionally attack birds, such as water fowl, but probably this is only when driven to do so by excessive hunger. The American fishermen hail with pleasure the appearance of the Osprey in the spring, as it serves to denote the appearance of shoals of herring and other kinds of fish, to which the bird serves them as a guide, and for this reason it is protected by common consent.

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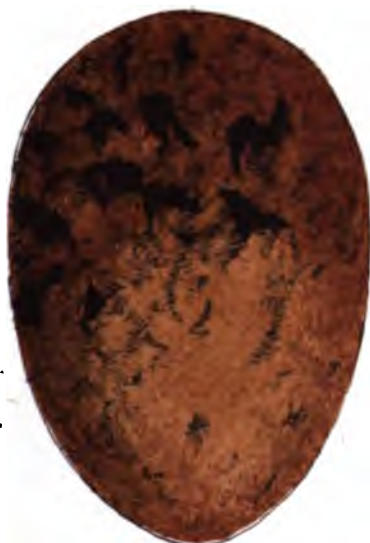
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1



2



3

OSPREY.



BUZZARD.

Genus IV., Buteo, Flem.

Burzo.—(?)

The birds of this genus are of moderate size. The head is small in proportion to the rest of the body, and rather flattened. A space round the eye is bare, or clothed with stiff bristles. The wings are rounded; the third or fourth quill-feather being the longest; when closed they reach near to the end of

the tail. The tail is moderately long, and rather rounded at the end. The legs are longer than in the true falcons, but the feet and bill smaller in proportion. Two species are found in Britain, which may easily be separated by reference to the *italicised* sentences in the following descriptions:—

4, BUZZARD.

Buteo vulgaris, Flem.

Shreak (S. W. England).

Puddock (S. E. England).

La Buse (France).

Mause Falk } (Germany)
Wald Geyer }

Falco Bottaon } (Italy).
Pagana }

Bod teircaill (Anc. Britain).

VULGARIS.—From *Vulgo* (L.), common.

Size.—Male, length from 18 to 20 inches, expanse of wings about four feet; female, length 28 inches, expanse nearly five feet.

Plumage.—Very few birds vary more than the Common Buzzard in the color of its plumage; some being very dark, while others are very light. The bill is pale brown; cere and eye yellow; back, in ordinary specimens, uniform brown; throat, breast, and under parts creamy, with brown transverse spots; wings brown; tail paler brown, with darker bars, legs yellow.

IMMATURE birds have generally more mottling about the feathers, the colors not being so distinct. The eye is brown, and the claws not so long. The feathers on the back are edged with a paler color.

VARIETIES of this species are not unfrequently met with in countries where it is common. A very dark variety (pl. 4, fig. 2) is in the collection of Mr. James Varley, of Huddersfield. It is uniform dark brown, with a few pale streaks under the chin, and a few pale transverse bars under the belly. Another very handsome variety (pl. 4, fig. 3)

is in the possession of Mr. Hyanson, of Wakefield. Mr. Fredk. Bond, F.Z.S., has had a specimen of this species perfectly white.

Note.—The note is a sort of wild melancholy whistle, quite in keeping with the desolate scenes generally frequented by the bird.

Flight.—The Common Buzzard has frequently been seen flying low over fallow land, skimming just above the ground, probably searching for its prey, perhaps by scent. At other times its flight is high, and when seen against the sky its large round wings give to it an appearance larger than it really is, and experienced naturalists have mistaken it for an eagle. When capturing its prey it swoops down from a height or from the branch of some tree, clutches the victim in its talons, and bears it away. Mr. W. E. Clarke says (Nat., Vol. 5, p. 51):—"Before us is a celebrated mountain from whose inaccessible side a buzzard flies; at first she wings her way with heavy flight, performed by slow and deliberate flaps of her broad and powerful wings. She pauses, almost coming

to a standstill, and then wheeling, commences to rise by the most graceful and easy gyrations, performed apparently without the slightest effort. Higher and higher the bird rises, until at last she becomes a mere speck in the clouds, and the elevation reached cannot be less than 6000 feet."

Migration.—In England the Buzzard can hardly be said to be migratory, though large flocks have been seen all flying in one direction. It also ceases to roost on the fells as winter approaches, and comes down into the lower plantations, and, no doubt, those in the northern localities will come further south. In America, where it is very common, it is a regular migrant, arriving in the northern parts about the middle of April, and departing south at the end of September.

Food.—The food of the Common Buzzard consists of rabbits, hares, rats, frogs, and the smaller birds; it will also eat carrion, but probably only when other food is scarce. The mole seems to be one of the animals preyed upon by this bird.

IN CONFINEMENT the Buzzard is said to be easily tamed, and it soon becomes attached to its keeper. It should be fed upon raw meat, but if allowed at liberty it will find a considerable portion of its own fare in the shape of worms, and other garden vermin.

Habitat.—The Common Buzzard, like all other birds of prey, is much rarer than it was in former years; still it cannot be said to be uncommon, breeding plentifully in some parts of Scotland and Ireland, also in various places in England and Wales, where

one keeper recently trapped fourteen in thirteen months.

ABROAD it is to be met with in all the wooded countries of Europe, in North Africa, and in North America, where it has been observed as far north as the 57th parallel.

Nest.—The nest is sometimes placed in a tree, but generally it is built upon an overhanging ledge of some cliff. Not unfrequently the deserted nest of a crow or that of some similar bird will be adopted and repaired. This bird has been known to attack and drive a pair of ravens from their nest, which was then taken possession of by the aggressor. The nest when built by the Buzzard itself is very roughly put together, and is composed of sticks or heather lined with some softer substance, such as heather tops, grass, or hair.

Eggs.—The number of eggs laid by this species is generally two, sometimes three. They are greyish white, more or less spotted, streaked, or blotched, with red brown. From a statement in Hewitson's "Illustrations" it would appear that the eggs laid by young birds are more devoid of markings than those laid by birds of more advanced age.

VARIETIES sometimes occur with neutral gray markings mixed in among the red, which give the egg a very beautiful appearance; at other times they are white, without any markings of any kind. The Common Buzzard is said to be remarkably attached to its egg or young, and one kept in captivity sat and successfully brought up a brood of common fowls.



BUZZARD.

ROUGH-LEGGED BUZZARD.



5, ROUGH-LEGGED BUZZARD.

Buteo lagopus, Flem.

Fjoshent wrak, (Sweden).

Bickkam, (Lapland).

Piekonna, (Finland).

LAGOPUS.—*Lagos* (Gr.) a hare; *pous* (Gr.) a foot.

Size.—Male, length about 1ft. 10 inches, expanse of wings 4ft. 2in. Female, from two to four inches larger.

Plumage.—This species does not vary so much as the last one, and the variations to which it is subject, are probably the result of age.

THE ADULT MALE has the head covered with long pointed feathers, having brown centres and yellowish margins, giving that part of the bird a striped appearance; the space between the bill and eye is devoid of feathers but covered with a kind of bristle. The back and wings are brown, the primaries being rather darker and the secondaries tipped with lighter color. Breast yellowish-white, each feather having a brown centre. Across the belly is a broad brown band. The thighs are yellowish-white, spotted with brown and shaded with reddish. *The tarsi are clothed with feathers down to the feet.* The wings are almost white underneath, the tips of the primaries and the feathers about the first joint being dark. The tail is also whitish underneath, with a darker band across the end. During life the bill and claws are horn-color; the cere, eye and toes yellow. Dresser in his "Birds of Europe," says "the variation of plumage in this species, as with most of the Buzzards is so great that it is impossible to give descriptions of all the stages and variations of plumage."

THE FEMALE is generally paler than the male, becoming quite grey with age.

IMMATURE Birds, according to Dresser, are generally darker than adults.

THE YOUNG are at first covered with white down.

VARIETIES seem to be very rare. Mr. Bond, whose experience in varieties is so great, never saw or heard of an albino or pied specimen.

Note.—The note of this species is said to be not unlike that of the Common Buzzard, and is described as "a loud squeal resembling the words ka haa." Another author says it resembles the words "Bii, bii."

Flight.—On the wing the Rough-legged Buzzard is slow and steady, beating over moors or meadows, and stealing unawares upon its prey. At other times it will soar aloft over its nest, after the manner of its commoner congener. On the wing this species may be distinguished by the *under side of the tail being white.*

Migration.—This bird, like the last, is a migratory species. Here, where it is so rare, its movements cannot be much observed, but on the Quickiock fells, in Lapland, where it is abundant, it arrives as a spring migrant early in May. It must remain till, at least, the middle of September, for the "Old Bushman" found young in the nest as late as the sixth of August.

Food.—On the Norwegian fells the food of the Rough-legged Buzzard is principally Lemming and fell mice, but it occasionally attacks other animals, such as Ptarmigan, rabbits, rats, moles, and also frogs and large insects. It seems to feed later than most of this family, being often seen hawking about long after sunset.

IN CONFINEMENT it should have plenty of room, a condition which applies equally to all

birds, with water for washing, and be fed upon raw meat, or any of the animals named above.

Habitat.—The Rough-legged Buzzard is frequently met with in this country, there scarcely being a county in which it has not occurred. In some of the south-east and eastern counties it has been common in certain years, particularly on some of the rabbit warrens of Norfolk and Suffolk. In north-west Yorkshire, about Skipton and Craven, it is occasionally met with, and one is the possession of Mr. Smithurst, of Leeds, which he captured in Bishop's wood, near Selby, when on a mothing expedition. In Ireland it is said to be rare, but no doubt, both there and in many other parts of Britain, many a fine specimen has been killed, the only record left of it being two rusty nails and a damaged skull perhaps on an old barn door—not much to identify a species by.

ABROAD it is common over the northern parts of Europe; not rare in Germany, Holland and Belgium; it occurs also in parts of Russia. In southern France, Italy and Sardinia it is rare, and does not seem to have been met with in Greece, and it is very doubtful if in Spain, Portugal, or Africa. It is found in Asia. This species does not

occur in America, it having been confounded with a closely allied species—*B. Sancti Johannis*.

Nest.—In Britain the nest of this species has been seldom met with. One is recorded from the neighbourhood of Scarborough, but it is in the wildest parts of Scotland that it should be looked for. On the Lap fells the first nest found was on the 21st of May. It is placed in a tree, or on a rocky ledge up the side of the fells. The nest is described as a coarse edifice of sticks, very loosely put together, and lined with grass and moss.

Eggs.—Three eggs is the usual number laid by this bird, but occasionally a nest is found containing four, five, and in one instance even six. Many are almost undistinguishable from those of the common Buzzard and Kite. The markings are generally more numerous, and larger, and more defined, but vary much in color. Some specimens are dingy white with a few faint marks. One (pl. V, fig. 2.) received from the late Mr. J. H. Dunn of Stromness, is marked not unlike some specimens of the Sparrowhawk; and another (pl. V, fig. 3.) which I have copied from "*OOTHICA WOOLEYANA*" is beautifully streaked with pale brown and grey. The specimen from which this latter figure was taken came from Lapmark.

V



2



3

ROUGH-LEGGED BUZZARD.



HONEY BUZZARD.

Genus V, *Pernis*, Cuv.

PERNIS.—*Pernis* (L.),—a Bird of Prey; Buzzard.

This genus may be distinguished from the last by the absence of the bare or bristly space around the eye, the front of the head being

covered with small thick-set scale-like feathers; the leg is feathered a little below the knee. Only one species occurs in Britain as a summer visitant, occasionally remaining to breed.

6, MONEY BUZZARD.

Pernis apivorus, Linn.

Bi wrak, (Sweden).

La bondrée, }
Buse bondrée, } (France).

Wespen-busard, (Germany).

Bod-y-mel (Anct. Britain).

APIVORUS.—From *Apis* (L.), a bee; *voro* (L.) I devour.

Size.—Length of male nearly 2 ft.; expanse of wings 4 ft. Female from 2 to 3 inches longer each way.

Plumage.—This bird varies much in plumage, the under parts of some being nearly white, while others are a brownish color, more or less barred.

THE ADULT MALE has the front of the head clothed with small closely set ash grey feathers; crown and nape yellowish, or whitish, each feather having a brown centre. Back and wings brown; throat, breast, and under parts yellowish white, each feather being more or less streaked longitudinally on the throat, and transversally on the breast with brown bars; tail with three or four brown bars; bill horn color; cere, eyes, and feet yellow. Some have the upper part of the head blue, forming a cap, and is then called the Capped Buzzard.

THE FEMALE may be distinguished by being larger, and generally not having the ashy grey in front of the head. The figure is from a specimen in my father's possession, killed at Storthes Hall, near Huddersfield.

WHEN IMMATURE both sexes have the front of the head buff, and the eyes not so clear a yellow as in the adults.

THE YOUNG have the top of the head forming a cap of a dark cream color; the rest of

the body white. Mr. Bond has the nestling young in his collection.

VARIETIES of this species sometimes occur of an entire brown. A figure (pl. 6, fig. 2) is given from Hancock's "Birds of Northumberland and Durham;" and Mr. Bond has another similar specimen. Others are very pale, especially on the under parts. I have copied a figure (pl. 6, fig. 3) from "The Naturalist," edited by Beverly R. Morris, Vol. II, p. 168. It was in the collection of the late Mr. Allis, of York; and was killed near Bridlington. A similar one, but with more white about the head is figured by Mr. Hancock in the work referred to above.

The Note has been described as a plaintive whistle, resembling that of the Golden Plover.

Flight.—On the wing this bird glides softly and swiftly through the air, generally flying low.

Migration.—Hancock says that this bird arrives on our coast in May, and departs in August, September, and October, the old birds leaving first.

Food.—Honey, and the larvæ of bees and wasps is the natural food of this species. It robs the nests of these insects with impunity, tearing the comb in pieces, and eating the honey and grubs. It will also devour other insects, eggs of small birds, and reptiles. One which was killed in Ireland had its face

smear'd with cow's dung and in its stomach was found the remains of Coleoptera, and other insects, which in all probability it had been extracting from the dung. Others have been observed flying over sheets of water and have been seen to take dragon flies in their claws and convey them to their mouth. Insects seem to be the proper food of this species, though when driven by hunger, small animals such as rats, mice, and moles are attacked. Young birds have also been taken from the stomach upon dissection; the one figured had in it the remains of young thrushes.

IN CONFINEMENT it may be treated as other birds of prey. One in Mr. Hancock's possession ate strawberry jam sweeten'd, with apparently as much relish as if it had been its natural food, honey.

Habitat.—The Honey Buzzard has been frequently met with of late years in England. In the New Forest and other wooded districts in the south it is by no means so rare a bird, as generally supposed, and specimens are occasionally obtained in all parts of the country. Two have been obtained of recent years in the neighbourhood of Huddersfield.

As it is found in various parts of Europe, it is less commonly in all wooded districts. In Holland it is rare, but in some parts of Sweden it is common. It also occurs in various parts of Asia, and in Africa.

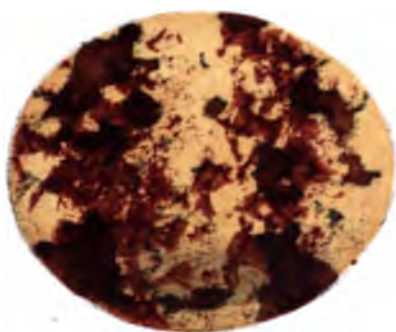
Nest.—A few instances of the nesting of this species in Britain are on record. A pair is mentioned by Gilbert White as having built a tall bush in a wood in the parish of Salford, and others are mentioned by

Hewitson. Young birds, which must have been reared in this country, have been killed in Cumberland, Northumberland, and other places. In Wexmäl, in Sweden, where it breeds commonly, the "old Bushman" states that it goes to nest the latest of the whole tribe, he never found one before June, and some have been taken as late as the middle of August. It does not build in the deep forests, but selects some one of the smaller plantations, where fir and beech are mixed together, always, however, selecting a fir wherein to place the nest. He noted a peculiarity in the nest of this species which he did not observe in that of any other bird, viz., that there was always some green birch branches with the leaves on interwoven with the dry sticks which composed the bulk of the nest. The inside is lined with some soft substance, such as wool or dry leaves.

Eggs.—The number of eggs varies from one to three. The nest mentioned by Gilbert White had only one egg, and that hard set. The egg of this species is perhaps the most beautiful of all the family. The ground color is creamy, spotted and blotched with different shades of saffron and madder brown. Sometimes the blotches are arranged at each end, and in a zone round the thick part. In general appearance the egg of this species comes nearest to that of the Peregrine, but the color is *deeper and brighter, and the shape rounder*.

VARIETIES sometimes occur, with all the ground color obscured by the spots or blotches, they then being of a dark brown with lighter shades of blood red and buff.

VI



HONEY BUZZARD.



KITE.

Genus VI. *Milvus*.

MILVUS.—The Latin name for Kite.

This genus is characterised by its great length of tail and wings, short legs, and general swallow-like appearance. Only one species is—or has been—a native of Britain, and may at once be distinguished from all other hawks by its *forked tail*. A single speci-

men of the Black Kite has been obtained in Britain; it differs from the present species in being much darker in its plumage. The Swallow-tailed Kite is an American species, and stragglers have occasionally reached our shores. Both these latter species will be noticed as accidental visitors.

7. KITE.

Milvus regalis, Briss.

Gläde (Sweden).

Milan Royal (France).

Pojana

Milvo

Nicchio

Nibbio

(Italy).

Rother milan (Germany).

Barcud (Anct. Brit.)

This bird is sometimes called "Gled" in England, and this, as well as the Swedish name, are probably derived from the Saxon word "glida," to glide or sail on the wing.

REGALIS.—Royal, from *Rego* (L.) I rule.

Size.—Male 2 ft. 2 in. in length, and about 5 ft. from tip to tip of wings. Female 2 ft. 6 in. long, and 5 ft. 6 in. in expanse.

Plumage.—Mr. Varley, of Huddersfield, has a very fine specimen in his collection, from which the figure has been taken. The head is ashy grey; back reddish brown, the feathers margined with lighter red; primaries nearly black; tail reddish brown, the margins of the feathers lighter. Throat reddish white, gradually increasing to burnt sienna, each feather with a dark stripe down the centre. Bill bluish horn color; cere, legs, and eyes yellow. The sexes do not differ in plumage.

THE YOUNG in down are white.

VARIETIES of this species seem to be very rare, I believe a white one has been recorded, but cannot at present refer to it.

Note.—The note of the Kite is described as a shrill squeal, resembling the word "whew." The young birds make a noise very like a kitten mewling.

Flight.—On the wing this bird is seen to the best advantage, its flight being very elegant, it glides with outstretched, and apparently motionless wings, making large sweeping circles around a poultry yard, or some other source of attraction. In common with some other hawks it sometimes wheels in circles, and ascends to such a height as to become almost or completely invisible. It is very easy to distinguish on the wing if the observer is near enough to see the forked end of its tail.

Migration.—In most of the countries of Europe, especially the northern ones, the Kite retires on the approach of winter, to the warmer parts of Africa. Even in Palestine the Kite moves south in the autumn, returning in early spring to the ravines of Ledanon and Gilead to breed.

Food.—The Kite seems to be almost omnivorous, feeding upon leverets, rabbits, birds, fish, moles, rats, and mice; also on reptiles, worms, and probably insects. It is said to be very fond of chickens, for which it will run into great danger in visiting farm yards. It is not very choice in its food, and will even feast off carrion. It

may sometimes be seen skimming over a sheet of water, or following the course of a stream, where it will dip down, and take dead fish, or other animals floating on the surface. When it takes its prey alive it generally steals upon it, and snatches it from the ground.

IN CONFINEMENT it is easily tamed, especially if taken from the nest when young. It is said to be very fond of rats and mice. When the Kite was abundant in England it was no uncommon thing to see one descend into the streets of London, or other large town, in order to pick up some dead fish or other offal, in this way rendering great service in clearing away offensive and putrid matter.

Habitat.—Though this species is not now known to breed in this country, or at any rate to have any regular nesting places, it has done so within a very recent period, and doubtless would soon establish itself again, were it not for the constant war waged against every bird of prey by the gamekeepers. The Kite, from its habit of taking its prey on the ground, and not caring whether it be dead or alive, is very readily taken in a trap, and has thus been easily exterminated. It is rarely seen in England now, and any chance visitor has little opportunity to escape the numerous traps and guns ready for its destruction. It prefers downs and hilly districts, especially if well wooded with tall

trees. In Scotland and Wales it used to be equally common, but is quite as rare now. It is said to have been common in some parts of Ireland over a hundred years ago, but is now a very occasional visitor.

ABROAD it is found all over Europe, common in Palestine. In the flat districts of Southern Russia it is abundant, and is found during winter in North Africa.

Nest.—The nest is either placed in a tall tree, or on the face of a rock, and if the latter generally where some small tree or shrub comes out from a crevice. It is composed of sticks, with bones, pieces of old leather, &c., lined with wool, or any soft material the bird can get hold of, such as pieces of old linen, cloth, &c., and is sometimes of large size. The last one recorded in Yorkshire was taken by Mr. Hugh Reid from a tree in Edlington Wood, near Doncaster. The old birds are very strongly attached to their nest, and will fight desperately with any intruder, so that more than one nest is seldom found in the same locality.

Eggs.—Three is the usual number of eggs laid by this bird. The ground color is bluish white, with red-brown blotches and streaks, chiefly at the larger end. They are not unlike some eggs of the common Buzzard, but Wolley says they may be distinguished by the those of the Kite having a greenish cast when held against the light.





PEREGRINE.

Genus VI.—*Falco*, Linn.

FALCO.—The Latin name for a Falcon.

This genus comprises some noble and beautiful birds, not only remarkable for their beauty of plumage, but also for their daring and courage in pursuit of their prey, hence they were highly valued to train and fly at game. We have four species in Britain, which vary greatly both in colour and size, but our smallest is much larger than some West Indian species, which are not much larger than Sparrows. Two or three species are occasional or accidental visitors to this

country; these will be spoken of afterwards.

In this genus the upper mandible is much hooked, strong, and with a notch or tooth on each side. All the species have a dark patch of feathers on each side of the lower jaw; this is sometimes called the moustache. The wings have the second quill feather the longest, and reach, when closed, nearly to the end of the tail, which is moderately long. The first quill feather is peculiarly narrowed towards the tip.

8. PEREGRINE.

Falco peregrinus Gmel.

Cliff hawk (Devon).

Pelegrim falk (Sweden).

Kappalo haukka (Lapmark).

Duck hawk (America).

PEREGRINUS (L.)—A foreigner, or wanderer.

Size.—Male, length from 15in. to 20in., expanse of wings a little over 3ft.; female, length 19in. to 23in., expanse 3ft. 8in. or 9in.

Plumage.—A fine young female (Pl. 8, lower figure) in my own collection has the forehead yellowish-white; top and sides of head, and a patch on each lower jaw, blackish-brown; back of neck same colour, mottled with yellowish-white; back and wings blackish-brown, each feather slightly margined with lighter colour; tail blackish-brown, with about seven lighter bars, and the tips of the feathers nearly white; throat yellowish-white; breast and under parts the same, with broad longitudinal streaks of blackish-brown. In the adult dress these markings change, and assume a transverse character. The male is much smaller, but otherwise does not differ in colour from the female. The bill of both sexes is horn colour; cere and legs lemon yellow. Eyes dark brown. The upper figure represents an adult male in pursuit of a teal.

IMMATURE birds are redder than adults, especially on the back; the head and neck are whitish tinged with red and shades of brown. The breast or under parts creamy or yellowish white, with *longitudinal* marks of dark brown. The full plumage is not attained until the third or fourth moult. Mr. Hancock says the mature dress is attained the first moult, but this is very doubtful.

THE YOUNG are at first covered with white down.

VARIETIES seem to be very rare—such as white or pied. One, a male, has been noticed, with the under parts pale salmon colour.

Note.—This species does not often make use of its voice only at the commencement of the breeding season, when it sometimes issues a loud and shrill cry.

Flight.—The ordinary flight of the Peregrine is by rather quick regular flaps of the wings, something after the manner of a pigeon. When pursuing its prey it is exceedingly rapid, the speed being calculated by Montague at the rate of 150 miles an hour. When pursuing its prey it will endeavour to ascend above it, and its victim



PEREGRINE.

North America, North and South Africa, and some parts of South America, as far as the straits of Magellan.

Nest.—The nest is placed on a shelf of some precipice, often in the most inaccessible places. Occasionally it is built in a tall tree, and sometimes the Peregrine will appropriate the nest of some other species, as that of a crow or raven. On the continent the top of a church tower is not unfrequently made use of. When built by the Peregrine it is composed of sticks, lined with coarse grass or fern (inland) or seaweed (on the coast). It breeds early in the spring, and during the time of laying, if

one bird be killed, the other will soon find a fresh mate. The attachment of certain birds to their breeding place is well known; the late Mr. Wolley tells of a certain cliff in Lapland which had been known to contain a Falcon's nest from 1436 to 1853. He has also found the nest on the ground.

Eggs.—Three eggs are generally laid, sometimes four. They are burnt sienna red, with darker shades and blotches, a very beautiful egg, something like a large Kestrel's, only more or less white.

VARIETIES sometimes occur perfectly white.

9, HOBBY.

Falco subbuteo, Linn.

Hebog yr Hedydd (Anct. Brit.)

SUBBUTEO.—*Sub* (L) under. The inferior of *Buteo*—The Buzzard.

Size.—Length of male about 13 in., expanse of wings 22 in.; the female expands to about 24 in.

Plumage.—The adult male has the whole of the upper surface, wings, and tail dark slaty blue, with a pale streak over the eye. The throat is white, increasing to reddish towards the feathers of the thigh. On the belly each feather has a dark stripe down the centre. The bill is horn-colour. The cere and legs lemon-yellow, and the eyes hazel-brown. The legs are feathered a little below the knee.

The following is a description of a fine female killed several years ago, in May, at Kingsbury, in Middlesex:—"Bill blue horn colour, tip darker, cere yellow tinged with green, back and upper parts bluish black, each feather with a narrow black line down the centre, the feathers in the crown of the head slightly edged with reddish brown, moustache and streak under the eye black, throat white, a streak over the eye white, two short streaks or marks at the back of the

neck white tinged with red, belly and sides white streaked with black, vent, under tail-coverts and thighs, bright rusty red with some small specks of black, flight feathers upper side black slightly tinged with blue, each feather has a narrow edge of white, underneath the wing the flight feathers are spotted with reddish cream colour, and the under parts of the shoulders are creamy white spotted with black, tail bluish black on the upper side, under, except the two centre feathers, the inner webs are barred or blotched with pale dusty red, legs and toes yellow, claws black.

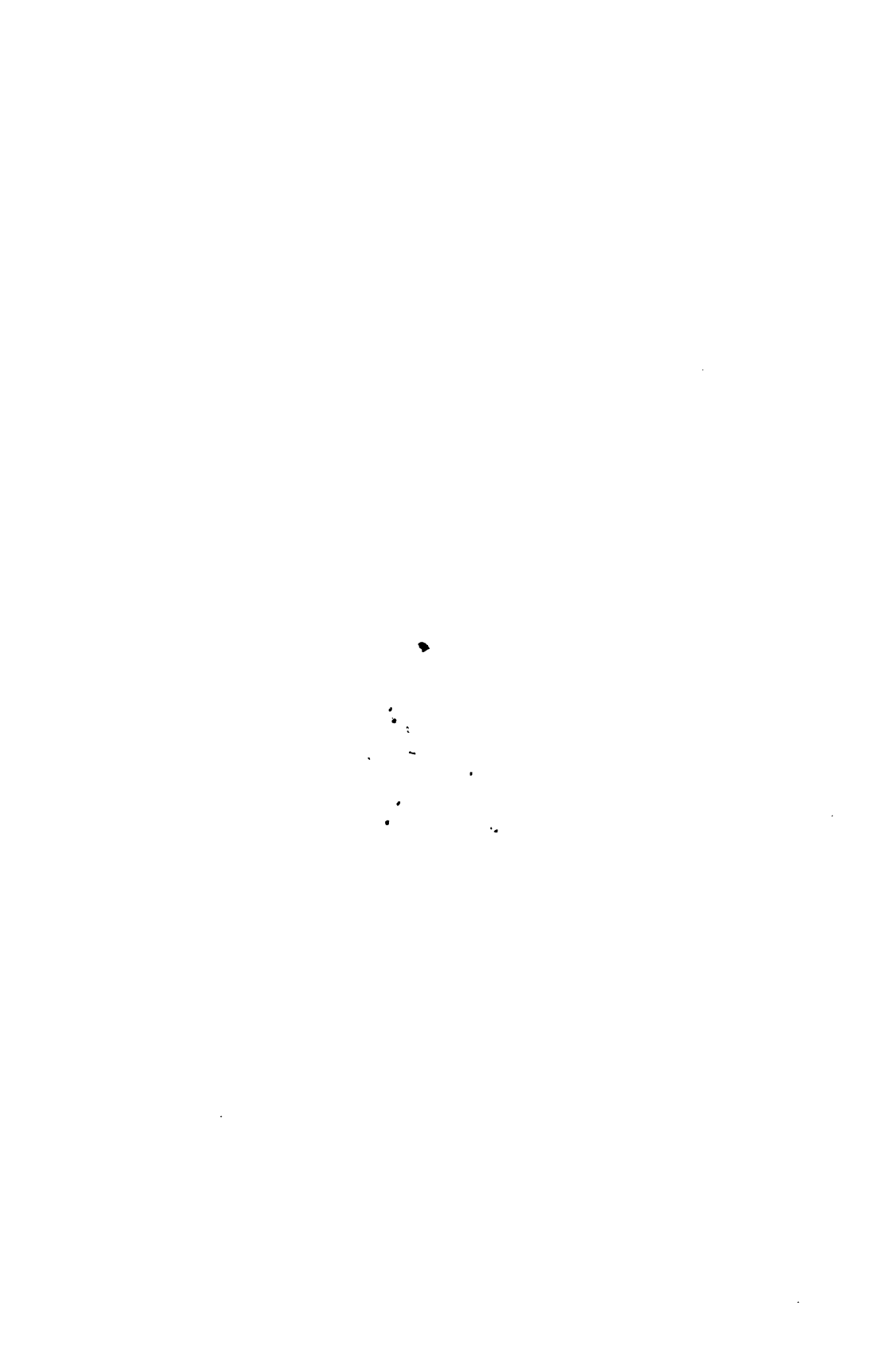
IMMATURE birds resemble the female, but the feathers on the back are edged with paler colour, and the tail more distinctly barred with light brown.

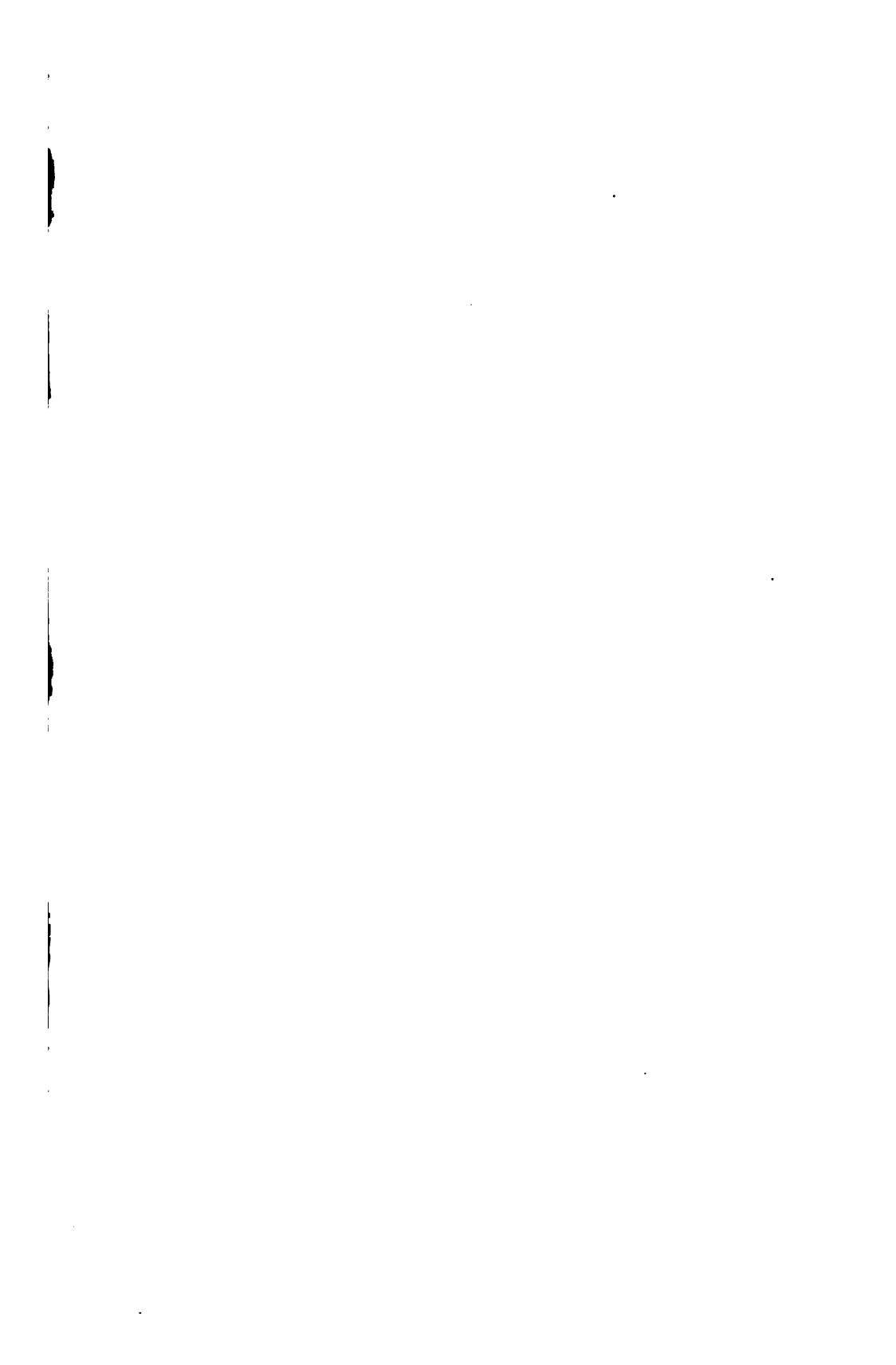
THE YOUNG in the downy state have the head, neck, and under parts dull white; back and shoulders dingy slate colour.

VARIETIES of the Hobby seem to be very rare.

Note.—The note of the Hobby is said to resemble that of the Wryneck.

Flight.—The flight is described as being







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one bird be killed, the other will soon find a fresh mate. The attachment of certain birds to their breeding place is well known; the late Mr. Wolley tells of a certain cliff in Lapland which had been known to contain a Falcon's nest from 1436 to 1853. He has also found the nest on the ground.

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neck white tinged with red, belly and sides white streaked with black, vent, under tail-coverts and thighs, bright rusty red with some small specks of black, flight feathers upper side black slightly tinged with blue, each feather has a narrow edge of white, underneath the wing the flight feathers are spotted with reddish cream colour, and the under parts of the shoulders are creamy white spotted with black, tail bluish black on the upper side, under, except the two centre feathers, the inner webs are barred or blotched with pale dusty red, legs and toes yellow, claws black.

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VARIETIES of the Hobby seem to be very rare.

Note.—The note of the Hobby is said to resemble that of the Wryneck.

Flight.—The flight is described as being

swift and steady, long sustained, and continued by very slight movement of the wings. Like the Peregrine it will sometimes ascend to a great height in pursuit of its prey.

Migration.—The Hobby seems, in England, to be a summer visitant, and is most frequently seen in April and the end of October, but specimens have been killed at later periods of the year.

Food.—Like all the other members of the present genus, the Hobby is fearless in attacking its prey, and was esteemed in falconry for flying at smaller game, such as larks, quails, and similar birds. Its natural food consists of small and medium sized birds, up to about the size of a partridge. But it has been especially noticed for its skill and perseverance in pursuit of the skylark, which seems to be its favourite food. The lark also exhibiting great dexterity in avoiding the fatal stroke of its pursuer. It is also said to devour quantities of large beetles. Mr. Henry Doubleday found the stomach of two specimens he examined filled with the common dung beetle (*Geotrupes stercorarius*).

Habitat.—In England the Hobby has never, so far as records show, been a very common bird, but still not a very rare one, as there is scarcely a county from which specimens have not been procured. In Scotland it is much less common, and in Ireland it is very rare. It has been known

to breed in Devonshire, Hampshire, Nottinghamshire, Suffolk, Dorsetshire, Cambridge-shire, Middlesex, Hertfordshire, and Warwickshire.

ABROAD it is a common species in most parts of Europe, except the extreme north; also in Siberia and India, China, Western Persia, Palestine, and some parts of Africa.

Nest.—Like most of this family the Hobby is a creature of circumstances, and adapts its nest to trees or cliffs, whichever seems most convenient. It appears, however, to prefer high isolated trees, on which it generally builds among the uppermost branches. The nest is composed of thorns and twigs, lined with wool. Sometimes, perhaps most frequently, the old nest of a crow, or magpie, will be adopted, and slightly repaired.

Eggs.—The eggs of the present species are rather larger and rounder than those of either the merlin or kestrel. Some specimens are hardly distinguishable from those of the Kestrel, being red-brown, with darker shades, in others the ground is pink, spotted with light brown. They are, however, never quite so dark as those of the Kestrel, being more like the Iceland Falcon in colour. The usual number is two or three, but occasionally four are laid. The eggs should be looked for from the middle to the end of June

IX



HOBBY.



MERLIN.

10, MERLIN.

Falcon asalon, Gmel.

Stone Falcon (Devon &c.)

Rochier (France),

Steinfalke (Germany).

Dvergfolk (Sweden).

Tsitsaschfalle (Lapland).

Ponta Haukka (Lapmark).

Corwalch } (Anct. Brit.)
Llymysten }

ÆSALON.—A species of Hawk mentioned by Aristotle, probably the Merlin or Sparrow hawk.

Size.—Male, length 11 in. or 12 in., expanse a little over 2 ft. Female, length 12 in. to 14 in., expanse, about 2 ft. 4 in.

Plumage.—The adult male has the crown of the head, and the whole of the upper parts clear slaty blue, each feather having a narrow black, or dark line down the centre; tail bluish-slate, with three darkish bands, the lowest one being the broadest, and the tips white. The primaries are nearly black. Over the eye is a pale stripe. Throat white. Sides of neck and belly tinged with reddish, the latter with longitudinal stripes of dark brown. Bill bluish-black; cere and legs yellow; eyes dark, but said to vary in colour.

THE ADULT FEMALE has the upper parts ashy-brown, in very old birds sometimes strongly washed with light slate-blue. The general tone both above and below is lighter than in the male. The tail has fine narrow bars.

The lower figure is from a specimen in my own collection, killed on the Yorkshire moors.

WHEN IMMATURE the males resemble the females in colour only darker, the blue-back not being fully attained till the third or fourth moult.

THE YOUNG in down are similar to those of the Hobby.

VARIETIES of this species are very rare. A Hawk is described and figured at page 193, vol. V., of the old "Naturalist," by the late

Dr. Hobson, of Leeds, having the wings, under parts, throat, and a patch behind the head white, but the rest of the colouring so abnormal as to render the identification of the species difficult. Probably this is a variety either of the Merlin or the Hobby.

Note.—The voice of the Merlin is not unlike that of the Kestrel, but weaker.

Flight.—The flight of the Merlin is generally low, coursing along hedgerows, or bank sides. When crossing from one part of the country to another, or when in pursuit of its prey, it flies with exceeding rapidity, its victim doubling and turning in vain endeavour to evade its pursuer.

Migration.—No doubt the Merlin is partially migratory, breeding in the north, and moving south on the approach of winter.

Food.—This daring little falcon is remarkably courageous in pursuit of its prey, which consists of small birds, such as larks and thrushes. But it will also attack game as large as partridges or ptarmigan, so bold and fearless is it. Thompson says that in Ireland it frequents the seashore in pursuit of dunlin, and other shore birds. It does not ascend and strike its victim from above, as is the case with the Peregrine and others, but gives chase, and captures its prey by excess of speed. It will also feed upon cock-chafers, and probably other large insects.

IN CONFINEMENT it is easily tamed. Mr. Lloyd had one which he shot and winged. He kept it in a walled garden for some time, and it soon learnt to come to its name, to follow the gardener, and pick up earth

worms which he turned up with his spade.

Habitat.—This species breeds in Scotland, in several parts of Ireland, and also in the north of England. In the south it occurs as a winter visitor. It frequents the high moorland districts, and seems particularly fond of sitting on the isolated blocks of stone found in such localities.

ABROAD it is met with nearly all over Europe, common in the northern parts; even, according to Temminck, within the Arctic circle. It is also found in various parts of Asia and Africa, but in the New World its place is supplied by a nearly allied species—*Falco columbarius*.

Nest.—The nest of the Merlin is generally placed upon the ground among heather, Hancock says, preferring a sloping ground among large tumbled stones. He mentions one pair

which occupied the nest of a crow, and Montague mentions a similar instance. In Lapland and other countries it occasionally builds in trees, but in Orkney and Shetland it places its nest on the face of precipices. The nest when placed on the ground is very slightly made of sticks, lined with a little wool or grass,

Eggs.—The eggs, from four to six in number, are laid about the first week in June. Mr. Wheelwright says in his "Spring and Summer in Lapland," "when first laid the eggs of the Merlin have a beautiful violet-red tinge with red-brown spots; this, however, soon fades, and they assume a red-brown ground colour, with dirty brown spots. Some very nearly approach those of the Kestrel, but are generally rather smaller, and finer in the markings."

X



MERLIN.



KESTREL.

11. KESTREL.

Falco tinnunculus, Linn.

Torn Falk (Sweden).

Cudyll Cock (Anct. Brit).

TINNUNCULUS.—"Conjectured from *Tinnio*—to chirp."—Morris.

Size.—Male, length 13 in. to 14 in., expanse, 2 ft. 3 in. or 4 in. Female rather larger.

Plumage.—The adult male has the bill bluish horn-colour, black at the tip and lighter at the base. Top and sides of head greyish slate colour, with a dark streak down the centre of each feather. Back light chestnut brown, each feather having a black shaft and a dark triangular spot near the tip. Primary and secondary wing-feathers greyish black with lighter edges. Tail, pale slaty blue, with a black band about an inch in width near the end, the tips of the feathers being white. Chin white, with a dark patch on each jaw. Throat creamy, shading off to a purple tint on the breast and belly, the breast having small longitudinal streaks, and the belly, spots of darker colour. Thighs buff, with a few small black streaks, the feathers in front reaching below the knee; under tail coverts white; legs and cere yellow; eyes dark hazel-brown.

THE FEMALE does not differ so much in size from the male as is generally the case with birds of prey. Both the back and the under parts are more mottled with dark, though the ground colour, especially of the latter, is lighter. The tail has about seven bars of dark colour, the ground being reddish brown; occasionally the ground colour in very old females is dingy slate blue.

IMMATURE BIRDS resemble the female in colour, the spots in the male becoming less at every moult. The blue tail is not attained until the third or fourth moult.

THE YOUNG are at first covered with white down tinged with yellowish.

VARIETIES are very rare. A pair of white

ones, however, were reported some time ago in the Zoologist.

Note.—The note of the Kestrel has been described as resembling the words, "pli, pli, pli," or "pri, pri, pri."

Flight.—The regular flight of the Kestrel is generally a graceful sail, but it has a peculiar habit of remaining poised in one place for a considerable time while examining the ground below for prey. When its keen eye catches sight of some object of attraction, the hawk suddenly drops, then poises again, repeating this at intervals, until either the prey escapes, or the bird swoops down and carries off its victim. From this habit it is often called the Wind-hover.

Migration.—Harting states that the Kestrel is migratory, moving northward in spring, and returning south in the fall of the year; but probably few, if any, leave England.

Food.—Although the Kestrel will sometimes attack small birds, and has even been known to devour its own species, yet these are exceptional cases, its staple food consisting of field-mice, frogs, newts, and snakes, as well as small animals and large insects, with which latter it chiefly supplies her young. On this account it should be encouraged rather than persecuted, as it renders great service to the farmer, and does little injury, if any, to the game preserver.

IN CONFINEMENT this bird is often made a pet, those becoming most docile and tame which are taken from the nest when young and reared by hand. Even when allowed their liberty, they will return to be fed, and have even been known to bring a partner. One pair is recorded as having bred in captivity. Hancock states that he could never

teach it to fly at birds, probably because these do not form its natural food.

Habitat.—This bird seems to be a common species, perhaps the most common Hawk, in all parts of Britain, except the extreme south-west of England; but like all other birds of prey, it is much scarcer than it was formerly.

ABROAD it is found in almost all parts of Europe; also in some parts of Asia and Africa.

Nest.—A rock side or face of a sea cliff is frequently selected as a site for the nest. More often, however, it is placed in a tree, or on the old nest of a crow or magpie, which is repaired. Several cases are on record of its having built in hollow trees, and on church steeples and old ruins. The

nest is very loosely put together, made of sticks and lined with some softer substance, such as grass or wool.

Eggs.—From four to six eggs are laid early in the season, generally before the end of March or early in April. The ground colour is greyish or yellowish white with dark red blotches. Sometimes the ground colour is red-brown, spotted and smeared with darker colour.

The VARIETIES of the egg sometimes occur dirty white without any red blotches or stains. One is recorded in the *Zoologist*, vol. viii, p. 7640, as being pure white.

Figs. 1 and 2 are from specimens in my own collection, taken in Yorkshire. Figs. 3 and 4 are from drawings kindly furnished by Mrs. Battersby, of Cromlyn, Ireland.

XI



1



2



3



4

KESTREL.



SPARROWHAWK.

Genus VIII., Accipiter.

ACCIPITER (L.), from *Accipio*, to take.

This genus, of which we have only one species, is characterized by the shortness of

the bill, the short rounded wings, long tail, and long slender legs and claws.

12. SPARROWHAWK.

Accipiter nisus (Linn.)

Sparl hok (Sweden.)

L'épervier (France.)

Falco palumbino (Italy.)

Die Sparber (Germany.)

Pilan, Gwepia (Anct. Brit.)

NISUS (L.) flight. Applied to the Sparrowhawk, perhaps, because of its rapid flight.

Size.—Male, length about 1ft., expanse 1ft. 10in. Female, length 1ft. 2in. to 1ft. 4in., expanse 2ft. 4in.

Plumage.—The adult male has the bill dark horn-colour, cere and legs yellow, the whole of the upper parts slaty-blue; under parts yellowish-white, shaded and barred with sienna red. Eyes yellow.

THE FEMALE, which is much larger than the male, has the upper parts dark ashy-brown, the tail with four darker bars; under parts white, the throat streaked and the belly barred with ashy-brown.

IMMATURE males resemble the female in colour.

THE YOUNG are at first covered with white down.

VARIETIES of this species occur, perhaps more frequently, than of any other bird of prey. A case in the Leeds Philosophical Museum contains thirty-three varieties. I have seen specimens entirely drab, and Mr. Bond tells me of one in London pure white, with the margins of the larger scapular feathers and the flanks, tinged with light clear rusty-red. Morris records one, a male, "the whole plumage being as white as snow." Mr. Hancock figures a male in his "Birds of Northumberland and Durham," being destitute of the red bands on the breast and belly, the whole under parts being white, tinged with rufous.

Note.—During the breeding season, the old birds are said to make a noise exactly like a young cat.

Flight.—The flight of the Sparrowhawk is quick and steady; gliding steadily, but rapidly, along the side of some fence, then suddenly darting over and seizing some unwary yellow-hammer, or other small bird which the hawk had "spotted out" as its victim. When flying in the open air its movements and general appearance is much like that of the cuckoo.

Migration.—I am not aware that the Sparrowhawk is migratory in this country.

Food.—In this species there are some grounds for the game-keeper's persecution, but "*Honi soit qui mal y pense*," and do not slaughter all hawks because the voracious Sparrowhawk happens to be one of that tribe. It preys upon all kinds of small birds, and will doubtless also take the young of the larger game. It is very bold, indeed we might almost say reckless, in pursuit of its prey. Not unfrequently has it been known to chase small birds through open windows. It has sometimes dashed through a window at a cage-bird that has been hung before it. When a luckless bird finds itself pursued by a Sparrowhawk, it is generally so terrified that it will seek refuge in all kinds of places; it is recorded of a swallow on such an occasion, having flown into the breast of a lady.

IN CONFINEMENT, although naturally a fierce and voracious bird, the Sparrowhawk is capable of being tamed, and even trained to fly at small birds. One is recorded as having been known to live in a dovecote, on the most sociable terms with the pigeons; but this is doubtful, as the Kestrel is known by the name of Sparrowhawk by some country people. But to tame them properly they should be taken from the nest while young, and the males and females should be kept separate, otherwise the latter, being superior in size, will fall upon and devour the former, if left too long without food.

Habitat.—This is still one of our commonest birds of prey, being of frequent occurrence in almost all the wooded districts of Britain, and not rare in the cultivated parts.

ABROAD it is common all over Europe, except perhaps the extreme north. It extends across Asia, to Japan and China, and to most parts of India. Also in Western Asia to Arabia and Eastern Africa. It breeds in Algeria and in the Canaries, and is found occasionally in Malta and Madeira.

Nest.—Generally that of a crow or magpie is adopted, but sometimes, probably when these are not forthcoming in suitable localities, the Sparrowhawk builds one for itself, loosely composed of sticks. Sometimes it is placed in a rock.

Eggs.—From four to six eggs are laid about the first or second week in April. The ground colour is bluish-white, beautifully mottled and blotched with red and brown; generally the blotches are most numerous at the large end, but sometimes they are concentrated round the thickest part, and at other times at the small end. The Egg of the Sparrowhawk is very beautiful and cannot well be mistaken for that of any other species.

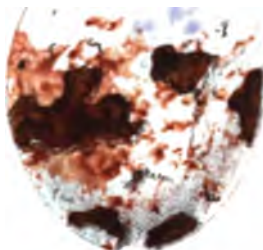
VARIETIES sometimes occur entirely without spots, and at other times with the spots indicated by faint shades, like Fig. 2.

Figs 1 and 2 are from specimens in my own collection. Figs. 3 and 4 are from drawings kindly furnished me by Mrs Battersby, of Cromlyn, Ireland, taken from specimens in her collection.

XII



1



2



3



4

SPARROWHAWK.



COMMON BAZZARD.

Genus IX., *Circus*.

CIRCUS.—The Greek name of some kind of hawk.

The members of this genus may be distinguished from all the rest of the *FALCONIDÆ* by the more elongated form, the long slender tarsi, and the pointed wings, which reach, when closed, almost or quite to the end of the tail, and in this respect

differ much from the last genus. Their close proximity to the Owls is manifest by the soft loose state of their feathers, by their having a frill of short stiff feathers round the cheeks, which can be raised or depressed at pleasure, and by their laying white or nearly white eggs. Three species are natives of this country.

13. MARSH HARRIER.

Circus Æruginosus (Linn.)

Harpye

Busard de Maris } (France.)

Fisch-geyer, &c. (Germany.)

Bod y giverni (Anct. Brit.)

ÆRUGINOSUS.—

Size.—Male, length 1ft. 8in. or 9in.; expanse, a little over 4ft. Female, 1ft. 10in. or 2ft.; expanse 4ft. 5in. or 6in.

Plumage.—The Harriers, or at least the males of the several species, are subject to great changes, with regard to colour; and there is no wonder that the males and females of the same species should, at first, have been thought to be distinct. The present species, though not subject to change to the same extent as the two next to be described, varies considerably between the nest plumage and the garb of maturity, and I feel by no means certain as to which should be described as the adult dress. The adult is figured and described by Yarrell as having the tail and wing coverts bluish grey, and he states that this state of plumage is arrived at after the third moult. Gould, in his magnificent work on the "Birds of Great Britain," gives two plates, one of them representing the adult bird in this same state of plumage. Morris also gives a similar figure as the adult bird. If this be the regular adult plumage, it seems strange that out of the many specimens which have come under my notice, not one of them should have been in this particular dress. I know of no instance of its having

occured in this plumage in Britain, and Blyth states that it has not occurred even in Europe; though Mr. Bond states that he has seen two specimens killed in this country, with a decided tint of grey on the wings and upper side of the tail, but not nearly so light as some foreign specimens which have come under his notice. On the contrary, it is stated to be of common occurrence in India, and Jerden states that Gould and Yarrell took their figures from Indian specimens. This information I obtain from "Hancock's Catalogue of the Birds of Northumberland and Durham," and I concur with him in thinking this a variety, or local form, or race. Some birds, as I shall have to show in the case of the Crossbill, only assume their final dress after a number of years, and an almost equal number of changes; and this may be the case with the Marsh Harrier of the East, but here at least it cannot assume this dress "after the third moult," otherwise it would be certain to come under the observation of ornithologists oftener than it does. This form is represented in the upper figure on plate 13.*

*Since the above was in type I have been informed that two specimens in this state of plumage are recorded in Stevenson's "Birds of Norfolk" as having been obtained in that county. This hawk seems to have been plentiful in Norfolk many years ago, yet he states that adult birds are extremely rare, thus, a very great majority of Marsh Harriers must have died a premature death.

THE MATURE BIRD then, of this country at least, I will describe as being of an almost uniform dark brown, the feathers on the crown, nape, and chin, whitish yellow, with a brown streak down the centre of each feather. Sometimes they occur without the orange spots on the head. Bill bluish black; cere and legs bright yellow.

IMMATURE BIRDS may be known by the nape, &c., being less streaked with brown, and the light portion of a deeper orange. The rest of the body is not of so uniform a brown, the feathers being margined with paler colour.

THE YOUNG at first are covered with white down.

VARIETIES having part of the flight feathers and other parts of the body white, are recorded by Selby, Latham, Montague, &c., but I have been unable to obtain one of these to figure.

Note.—This bird is generally silent, but during the breeding season both sexes utter a clear and rather loud call, resembling the syllable "keew." The female also calls somewhat like "pee up," rather prolonged, but clear and shrill.

Flight.—The flight of the Marsh Harrier is low, skimming noiselessly along near the ground, and pouncing instantly upon its prey when observed. At intervals it alights upon an eminence to devour its prey or survey the ground, after which it resumes the same coursing flight.

Migration.—This species in some parts of Europe is migratory, but not, I believe, in Britain. Morris, at the commencement of his article on the Marsh Harrier, states that they remain in this country "all the

year round," but finishes by saying that it is a "regular migratory species."

Food.—The food of this bird consists of coots, dabchicks, water hens, frogs, snakes, and such other small animals as frequent its haunts. It will also feed upon dead animals, and is even said to take fish as they skim the surface of water.

IN CONFINEMENT it may be treated to a similar diet with the addition of fresh meat.

Habitat.—Formerly this species was common on all the fenny districts of England, especially those of the eastern counties, but of late years it has become very scarce in common with most other birds of its class. It was also common in Wales, where Montague counted nine at one time feeding on the carcase of a dead sheep. It is still met with at times, and even in some cases breeds in Britain, but is now considered a rare bird.

ABROAD the Marsh Harrier is found over most of the central and southern countries of Europe, but does not range far north. It is also met with in North Africa. Eastward it is common as far as India, but beyond that it is rare, though specimens have been met with as far as Japan.

Nest.—The nest is composed of sticks, sedges, and coarse grass. It is generally placed upon one of those large tussocks of sedge, so abundant in the swampy haunts of this species. The nest may still occasionally be met with in Ireland, Scotland, and some parts of England.

Eggs.—Four eggs are usually laid, sometimes five. They are white, with a faint tint of blue. The old bird begins to sit early in May.



MARSH HARRIER



HEN HARRIER.

14. HEN HARRIER.

Circus cyaneus (Linn.)

Sammakko-Haukka (N. Lapland).

CYANEUS.—Blue coloured.

Size.—Male, length 17 in. to 19 in.; expanse of wings about 2 ft. 9 in. or 10 in. Female, length 20 in. to 22 in.; expanse, 2 ft. 9 in. or 10 in.

Plumage.—THE ADULT MALE has the bill nearly black; cere, eyes, and legs lemon yellow. The base of the bill is covered with black bristles. Head, throat, breast, and back blue grey. The first six primaries nearly black, white at the base, and the fourth slightly longer than the third. Upper tail coverts white. Tail blue, the outer feathers white with grey bars. Under parts below the breast, white.

THE ADULT FEMALE has the crown of the head, ear coverts, breast, and back dark brown, the feathers about the neck margined on each side with lighter brown. A light streak extends over, and another under the eye, with a dark line between the two. Feathers behind the neck white, with a brown line down the centre of each. Primaries dark brown, the outer webs greyish and the inner webs barred. Upper tail coverts white. Tail, the two centre feathers dark brown with six still darker bars, the rest ferruginous with dark brown bars. Under parts, below the breast, ferruginous white. The two sexes were formerly considered distinct species, the male being known as the "blue hawk," and the female as the "ringtail." The two figures on the plate are from specimens in my own collection.

IMMATURE males resemble the females in colour, but begin to change the second year.

THE YOUNG are at first covered with white down. Some years ago I saw four which had been taken from a nest, and the old ones killed, in North-west Yorkshire.

VARIETIES.—I never saw a variety of this species.

Note.—The note is described by Morris as being "loud and clear, resembling in some degree that of the Kestrel."

Flight.—The flight of the Hen Harrier, like the rest of the genus, is low, sweeping over the surface of the ground in a kind of hunting fashion, hence probably the name Harriers. They are said occasionally to soar aloft like many others of this family.

Migration.—This species seems to be partially migratory, being of more frequent occurrence in the autumn.

Food.—The Hen Harrier feeds upon game, thrushes, larks, and all kinds of small birds; rabbits, young hares, and other small mammals. Dr. Saxby states that in hard weather it resorts to the sea coast in search of sandpipers, &c., and small fish, as he has proved by dissection. It also seems fond of eggs, and of snakes, lizards, and other reptiles, twenty lizards having been taken from a single bird. The meaning of the Lap name given above is "frog hawk," showing that the same habit obtains there.

IN CONFINEMENT they may be treated similar to the other birds of prey.

Habitat.—Formerly this was rather a common species in many parts of Britain, but now, alas! it is much rarer. It occurs occasionally all over England, Scotland, and Ireland. A few pairs, I believe, still breed in England, but their numbers are decreasing every year.

ABROAD it is found over all the flat districts of Europe, principally in the south, and in North Africa; also as a winter visitor to Asia Minor, Palestine, India, and China.

Nest.—The nest is placed upon or near the ground, generally upon a waste or moor, among furze bushes or heather. It is composed of sticks of small size, coarse grass, heather, hay, and wool.

Eggs.—Four or five eggs are laid, in some rare instances six. They should be

looked for the first or second week in May. Their colour is pale bluish white; in some cases, but very seldom, slightly spotted with red. There must be some error in the statement in Bewick that the eggs are sometimes reddish with white spots, probably it should have been reversed, viz., eggs white, sometimes with reddish spots.

XIV

HE'V. HAV-EP.



MOUNTAIN'S HARRIER.

15. MONTAGU'S HARRIER.

Circus cinerareus (Mont.)

CINERAREUS (L.) Ash coloured.

Size.—Male, length about 1ft. 5in., expanse 3ft. 8in.; female 1ft. 7 or 8in., expanse 3ft. 9 or 10in.

Plumage.—A pair in my own collection, which I should presume are adult, are as follows:—

MALE.—Bill, dark horn colour, darker at the tip; cere, eyes, and legs yellow. Head, neck, and throat light bluish grey or ash coloured; back, wings (except primaries) and two central tail feathers, a darker shade of the same colour; primaries nearly black. The secondary wing feathers have each two black bars with indications of a third, but only the outer bar shows, the others being concealed by the wing coverts. The tail has the two outer feathers white, with four chestnut bars and an ash coloured one near the tip; the next feather is barred in the same way, but less on the outer web, which is mainly ashy grey; the next two are ashy grey, with blackish bars on the inner webs only; and the two central ones are entirely ashy grey. The under parts are white, the feathers on the sides and belly with a central streak of chestnut brown.

FEMALE.—Bill, eyes, and legs same as the male. Upper parts dark brown, the feathers on the nape margined with lighter colour. A pale streak over the eye and a broader one of the same colour below it. Ear coverts brown. Under parts yellowish white, each feather with a central chestnut streak. Tail, outer feathers white, with four brownish bars, each feather darker, until the centre ones are dull brown barred with darker. Tail coverts white.

IMMATURE birds vary very much in colours. Mr. Bond has had two full-grown females, from the fens, with the whole plumage much darker than usual, every feather in the back

margined with rich rufus; the whole of the under parts, neck and throat rich reddish buff colour. The males begin life in a garb somewhat similar to the females. In all stages this species may be distinguished from the last by the greater length of the wings, which *reach nearly or quite to the end of the tail*, while in the Hen Harrier they do not reach the end of the tail within two or three inches.

YOUNG.—The young in down are white tinged with ash colour.

A VARIETY of an uniform sooty black sometimes occurs, and does not seem very rare. One is recorded by Hancock, in his "Birds of Northumberland and Durham." Mr. Stevenson records specimens from Norfolk, Kent, and Sussex; and one is recorded in the "Zoologist," which, in addition, had the nape marked with white.

Note.—Mr. H. Saunders, in his notice of the nest he found in the Isle of Wight, in 1875, says the female made a noise something like the Kestrel, when driving rooks from the neighbourhood of her nest.

Flight.—The flight of this species is said to be very similar to that of the Hen Harrier, but may be distinguished by the greater length of wings and tail.

Migration.—It is recorded as migratory in India and Africa, and probably was so in this country also, as it was seldom seen later than October.

Food.—The food consists of insects, reptiles, field mice, small birds and their eggs.

Habitat.—This species was but a few years ago the commonest Harrier in the Fens, and is recorded from both North and South, probably also from Ireland. It has

been known to breed in several parts of both England and Scotland.

ABROAD it is found over the greater part of Southern Europe, and I have seen specimens from India.

Nest.—The nest is placed very near or quite upon the ground, generally near or in some large tuft of carex or brushwood, and

is composed very loosely of small sticks, ling, coarse grass, &c., with softer material and sometimes a little wool for the lining.

Eggs.—The eggs are laid early, sometimes before the end of March. They vary in number from four to six, and are white with a faint tinge of blue, and occasionally spotted with dark chocolate brown.

XV

MONTAGU'S HAPPY





LONG-EARED OWL.

FAMILY II. STRIGIDÆ.

The members of this family inhabiting Britain are sometimes divided into several genera, but the species are so similar that

they may with advantage all be placed in one genus.

Genus I. *Strix*.

Strix. The Latin name for an Owl.

These birds are very peculiar in their structure, but are so well known as not to require a very minute general description. The head is large, the face round and flat, surrounded by a frill of short stiff feathers. The eyes are large and sunk, and some, if not all the species, have the power of closing one eye only, as if they slept with one at a time, and always had "one eye open." The upper mandible is pointed, and much curved over the end of the lower mandible. The plumage is very soft and fluffy, enabling the birds to approach their prey on the wing, and execute the most rapid manoeuvres in doing so, without making the slightest noise. The legs are covered to the ends of the toes with a kind of hairy down, the outer toe on each foot can be moved backwards, almost as much as that of a parrot. In some species the head is adorned with two tufts of feathers called "ears" or

"horns," which can be raised or depressed at pleasure. Morris implies that the depression is only apparent, caused by the other feathers on the head being raised. These tufts are not the true ears, which are of large size, enabling the bird to hear the slightest sound. The ears may be seen by raising the frill of feathers on either side of the face. Owls are chiefly of nocturnal habits, but some species fly in quest of prey by day, sometimes even in bright sunshine. Their food consists of small mammals and birds, the smaller ones also devour beetles, moths, and other nocturnal insects. The indigestible portions of their food are formed into small rounded pellets in the stomach, and then disgorged. The eggs are white, and generally of a rounded form.

Four species of owls are natives of this country, but several European species visit us occasionally, and one American species has been obtained.

16. LONG-EARED OWL.

Strix otus, Linn.

OTUS, *Otus* (Gr.)—The ear.

Size.—Male, length 1 ft. 2 to 3 in.; expanse nearly 3 ft. Female slightly larger.

Plumage.—A pair in my collection, the male of which is figured on the plate, are as follows:—

MALE, bill nearly black; eyes orange; "horns" dark brown, edged with ochre yellow; face grey, intermixed with brown; the feathers of the frill pure white, tipped with dark brown; the whole of the upper parts finely mottled with grey, orange, and brown; primaries ochre, barred with black-

ish brown; tail yellowish, barred with brown above, pale underneath; breast and under parts yellowish white, with herring-bone stripes; legs and feet covered with yellowish hair-like feathers.

THE FEMALE is similar, but not so distinctly marked, having less or lighter brown, and more yellow in its plumage.

IMMATURE birds are like the adults, except that the plumage is duller in colour. The length of ears will sufficiently distinguish this species in all stages.

THE YOUNG is at first covered with white down.

VARIETIES. Mr. T. E. Gunn records (*Nat.*, Sept., 1864), "an immature male, obtained at Burgh, near Gt. Yarmouth, on the 3rd of July, 1861. Its head, neck, breast and abdomen were white, intermixed with patches of its usual plumage, wings and tail partly white, upper wing coverts blotched with the same colour."

Note.—Most of the owls are well known in the country for their peculiar and dismal cries. Meyer resembles the note of this species to the word "hook." But generally the Long-eared Owl seems to be comparatively silent, except when young, at least this is the opinion expressed by Prof. Newton (Ed. of Yarrell.).

Migration.—Most if not all remain with us throughout the year.

Flight.—The flight of the owl is very little observed owing to its nocturnal habits. When out in the middle of a forest we may occasionally see a light fleeting shadow flit silently past us, or see the bird to better advantage gliding swallow like, between the eye and the moon-lit sky.

Food.—The food of this species consists of rats, mice, moles, young rabbits and hares; also of small birds which it takes from the perch while at roost.

IN CONFINEMENT they may be fed upon the same, and will also eat raw meat. They are very easily tamed if taken from the nest while young, and are very interesting creatures on account of their grotesque appearance and habits. If kept in a house or about a stackyard they are very useful in clearing it of vermin such as rats and mice.

Habitat.—This species is found more or less in all the wooded districts of England, and most of Scotland and Ireland.

ABROAD it is found over the greater part of Europe, in India, and other parts of Asia, and in Africa.

Nest.—This species never builds a nest of its own, but adapts that of a crow or magpie, preferring those that are in a thick fir or ivy-covered tree, sometimes repairing it by the addition of a little wool or a few feathers. It also repairs the deserted "Drey" of the squirrel.

Eggs.—The eggs are white, and nearly of equal thickness at both ends. It number they are said to vary from three to seven, and are laid during the latter part of March or in April. It has been suggested that the eggs are laid at intervals of a week or more, and that the young hatch at equal intervals.

LONG-EARED OWL.



SHORT-EARED OWL.

17. SHORT-EARED OWL.

Strix brachyotus, Forst.

BRACHYOTUS.—*Brachys* (Gr.), short; *Otus* (Gr.), the ear.

Size.—Male, length about 1ft. 2in.; expanse rather over 3ft. Female rather larger.

Plumage.—The following descriptions are taken from a pair in my own collection:

MALE.—Bill nearly black; eyes reddish yellow; the frill of feathers surrounding the eyes are dark in the centre, shading off to white at the outer extremes. The ears, which are much shorter than in the last species, are composed of a few feathers which are blackish brown in the centre and ochreous at the edges. The whole of the upper parts are of the same colours, each feather being pale ochreous, or whitish, and having a dark centre. The primaries are ochreous tinged with orange, and barred with brown. Tail ochreous, with about seven brown bars; under parts lighter, in some specimens nearly white, with longitudinal brown stripes which are thickest towards the throat.

THE FEMALE is darker in colour than the male, the yellow being deeper and the dark patches more pronounced.

IMMATURE birds are darker and browner in colour, and the markings larger, and the eyes lighter than in adult birds.

THE YOUNG, according to Dresser, is "covered with close, soft down; upper parts dull dark brown; the down tipped with warm ochreous; forehead and round the eye deep brown; under parts ochreous; the throat and upper breast clouded with sooty brown.

VARIETIES sometimes occur very pale in colour, the ochreous colour being entirely absent, leaving the ground colour white; the dark markings rather paler, giving the bird a very grey appearance. This variety is not peculiar to either sex.

Migration.—This is a migratory species, arriving in this country about the first week in October and departing in March, though not unfrequently it remains to breed. Coming, as it does, about the same time as the Woodcock, it is known in some districts as the Woodcock Owl. Upon its arrival it is generally found in some abundance in all the eastern counties. Its prey draws it into the vicinity of corn and stubble fields, where it is sometimes congregated in large numbers. At Flambro' Head some men begun to cut a field of corn, and seeing an owl they procured a gun and brought the marauder to the ground. As they proceeded with their work, owl after owl sprung up; each in turn were brought down, until when the field was done they had slain fourteen. Of course, this is only farmer-like, and quite compatitive with an Englishman's stupidity: the owls being there for the very awful crime of killing mice, they must be brought to the (iron) bar of (in)justice.

But man, proud man!

Drest in a little brief authority;

Most ignorant of what he's most assured,

His glossy assurance—like an angry ape,

Plays such fantastic tricks before high heaven,

As make the angels weep."—SHAKESPEARE.

Note.—The note of this species is said to resemble the words "Kiow" or "Keaw."

Flight.—The flight of this owl seems to be more diurnal than any other of the British species, flying generally in a pretty straight line by repeated and easy flaps of the wings.

Food.—Its food consists of rats, mice, and large insects; but when these are not procurable it will attack small birds up to the size of a plover. It will also eat reptiles.

IN CONFINEMENT it may be treated to a similar diet, with the addition of butcher's meat.

Habitat.—In this country the short-eared owl seems most numerous along the eastern counties of England. It is also found in parts of Scotland and Ireland. It seems more of a ground bird than the other species of owls, very seldom alighting in trees.

ABROAD it is found in most parts of Europe, also in various parts of Asia; in America, from the arctic regions to far south; and in Africa and the Sandwich Islands.

Nest.—Little or no nest is made, a hollow being simply scraped out on the ground beneath the shelter of some overhanging tuft of heather or other vegetation. The site chosen is generally upon a moor or heath. When any material at all is used it is generally some dry grass or something of that sort.

Eggs.—Four or five eggs are laid, but sometimes the number reaches six or even seven. They are white, and generally of a very rounded form. This species seems to breed rather later than the last.

22

SHORT-EARED OWL

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TAWNY OWL

18. TAWNY OWL.

Strix stridula, Linn.

STRIDULA.—From *stridulus* (L.), creaking, harsh.

Size.—Male, length about 1ft. 2in., expanse of wings about 2ft. 8 or 10in. Female one or two inches larger.

Plumage.—The following is a description of my own pair :—

MALE.—Bill pale horn colour. The eyes are dark brown. Face grey, with long black bristles on each side of the bill, and shading off to reddish beyond the eyes. Frill of feathers white, tipped with reddish and brown. Head and back reddish, or yellowish tan colour shaded with brown. Greater and lesser wing coverts white on the outer half of the web. Primaries yellowish white, barred with brown. Tail yellowish white, barred with brown. Under parts white, each feather with a dark brown mark down the centre and a ferruginous band across the end. Legs white, faintly spotted with brown.

THE FEMALE has scarcely any ferruginous, the markings being darker and more distinct, especially on the under parts. Mr. Bond says these differences of colour are not due to sex, and that the rufous variety similar to my male is the more common of the two.

IMMATURE birds are scarcely distinguishable from the adults.

THE YOUNG is at first covered with brownish grey down.

A VARIETY is recorded (Zool., p. 2411) with the parts light ash grey which are usually brown. A supposed case of melanism is reported (Ibis, 1876, p. 63) by Messrs. Sclater and Taylor. It was shot near Constantinople.

Note.—This owl is the veritable hooter and excels all the other species in that

accomplished act. I have frequently listened to their concerts in Sherwood forest and other places, and it is interesting to note the different pitched voices which the various individuals possess. Gilbert White noticed this. He says "A neighbour of mine, who is said to have a nice ear, remarks that the owls about this village hoot in three different keys, in G flat or F sharp, in B flat, and in A flat." The note is a wild and dismal "hoo, hoo, hoo," which is rendered still more melancholy by the stillness of the night. Owls seem to have a particular liking for dismal cries. Wolley, when in Lapland, had several owls brought round him at night by the barking of his dogs. He then tried some unearthly noises himself and was successful in bringing more. His attendant said that if anybody heard him they would think it was the "djefoul."

Flight.—This is not so buoyant and graceful on the wing as the last-named species, but being purely a bird of the night it is oftener heard than seen.

Migration.—Does not migrate in this country.

Food.—The Tawny Owl preys principally upon the smaller mammals—rats, mice, moles, young hares and rabbits. It will also sometimes eat birds, insects, worms, and even fish.

IN CONFINEMENT they soon become tame if fed by hand, especially if taken from the nest while young.

Habitat—This owl inhabits most parts of England and Scotland, but is rare in Ireland. It frequents wooded districts, especially where there are large hollow or ivy-covered trees, in which it resorts during the day.

ABROAD it is known all over Europe, in parts of Asia and north Africa.

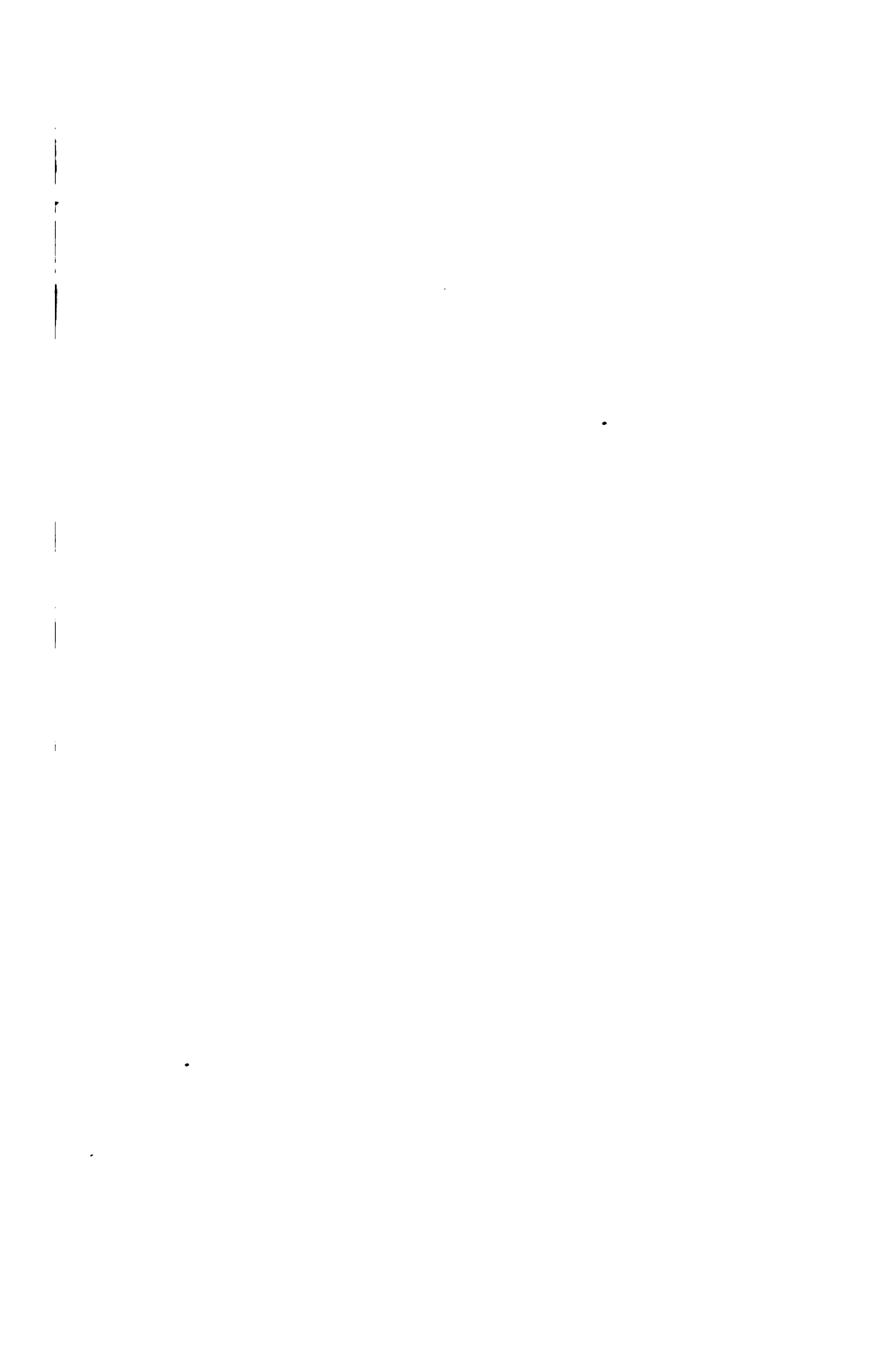
Nest.—The nest is placed in an old tree, and composed of chips of rotten wood, or sometimes in the old nest of a crow or magpie, which undergoes very little *répar*. Mr. Wharton records (*Ibis*, vol. ii., N.S.,

p. 324) a nest he found in Wales upon the ground. Mr. Bond says he has also heard of its breeding in rabbit burrows.

Eggs.—The eggs are laid in March, to the number of from three to five, and are white like the others of this genus.

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RED-BACKED SHRIKE.

Order XX.—Incessores.

This is the largest division of birds we have represented in Britain, and contains all the smaller perching birds, both insectivorous and graminivorous, and some of the larger kind—as the crows. It contains most of those comprised under the older Linnean order "Passeres." Most of the members of this order are insect feeders, and those which feed on grain feed also on insects during the greater portion of the year. Most of them are migratory, and principally come here in the spring to breed, and depart

in autumn, though some are winter visitors. It is in this order that we find the voice reach its highest perfection; and, perhaps, no country in the world is richer in song-birds than Britain. The architecture of the nest is generally more perfect in this than in any other class of birds, and for this the reason figures of the nests will be given of all obtainable species. Throughout this order the immature bird is remarkable for the barred or mottled appearance. The very young are hatched naked or nearly so.

FAMILY I. LANIADÆ.

This family comprises the Shrikes or Butcher birds. They form a natural connection between the birds of prey and the insectivorous birds. The beak has a notch or tooth on the upper mandible, similar to

that in the hawks, but they have not the sharp curved talons of the latter class. They live on large insects, *small* birds, and mice, chiefly the voles and shrews, which they impale upon thorns.

Genus I. *Lanius*.

LANIUS, a butcher, from *Lanio*, I tear.
Only one species is a native of Britain,

though three others have occurred as occasional visitors.

20. RED-BACKED SHRIKE.

Lanius collurio.

COLLURIO (Gr.) A name given by Aristotle to a bird, probably of the thrush kind.

Size.—Length about 7in., expanse 12in.

Plumage.—Male. Bill black; eyes brown. Crown of head, nape, part of back, and upper tail coverts bluish grey, a band across the centre of the back and wing coverts, chestnut brown. Primaries and secondaries blackish, the latter edged with lighter. Ear coverts black. The whole of the under parts pinkish white, lighter on the throat and under tail coverts. Legs brown; tail, two centre feathers black, the rest white at the base, each succeeding feather having more white than the preceeding one.

FEMALE, bill lighter at the base. The whole of the upper parts reddish brown, primaries and tail rather darker, and the

nape in old birds tinged with grey. Under parts white, barred with brown; tail brown, outside feathers partly white. Old females occasionally assume the plumage of the male.

IMMATURE BIRDS resemble the female, but are more barred, and rather darker in colour, both on the under parts and on the back.

A VARIETY of an uniform pale fawn-colour is recorded as having been killed at Lewes (*Zool.*, 2698). Cream and fawn-coloured ones have also occurred.

Note.—A friend who took a nest last season (1881), describes the old birds as being very noisy, something like the male sparrows, when two or three are clamouring over a female. But it makes little noise except when the young are in the nest.

Flight.—The flight is strong and direct, but sometimes rather wavering.

Migration.—A summer visitor, arriving towards the end of April, and departing at the end of September.

Food.—The food of this Shrike consists of the larger insects and small birds, and young mice, field voles and shrews principally. They seem to have a partiality for bees. Mr. James Varley records having found a large number of dead humble bees under a tree that was in flower at Woodsome, near Huddersfield. Specimens were sent to the late Mr. F. Smith, of the British Museum, and he gave it as his opinion that it was the work of Shrikes: After this, I had the satisfaction of discovering that a pair of Red-backed Shrikes had bred in the neighbourhood where Mr. Varley found the bees. These birds have the peculiar habit of fixing their prey upon a thorn or upon a forked branch, which has given to them the name of Butcher-birds. The fur or feathers is cast up in pellets, after the manner of the hawks and owls.

IN CONFINEMENT they soon become tame, and twist their food in the wires of the cage when they tear it to pieces.

Habitat.—This is a common bird in most of the Southern counties of England,

but it is rarely found further north than Yorkshire, and seems to be still rarer in Scotland, and unknown in Ireland. Formerly it bred frequently in the neighbourhood of Huddersfield, and still does so occasionally. It frequents hedgerows and thickets.

ABROAD it is found over the greater part of Europe, Africa, and Western Asia.

Nest.—The nest is generally built in a thorn-hedge or some such situation. It is very large for the size of the bird. The one figured was kindly supplied by Mr. C. A. Marriott, and is composed of grass, moss, and catkins of willow, lined with grass roots, and an inner lining of horsehair.

Eggs.—The eggs vary so much in colour, that it is difficult to describe the various shades. Some are rich rosy cream colour, with the spots nearly blood red; others pale salmon with dark spots and markings; others stone-colour, with brownish spots or markings, or whitish with pale brown marks. Most of the spots are in a zone round the larger end, but sometimes they are situated round the thickest part, or at the point.

VARIETIES occur pure white, but are rare.



RED-BACKED SHRIKE.

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BARN OWL.

19. BARN OWL.

Strix flammea, Linn.

Dylluan wen (Anct. Brit.)

FLAMMEA.—Flame-coloured, from *flamma* (L.), flame.

Size.—Male, length 1ft. 2in.; expanse, 3ft. 1in. Female slightly larger.

Plumage.—The delicate plumage of this bird is perhaps the most beautiful of all the British owls. The two sexes differ very little, if at all, and may be described as follows:—Bill, yellowish white; eyes, dark hazel brown. The whole of the upper parts are dull, the feathers tipped with blue-grey, and with a black spot including a white one. Tail buff, with slightly darker bars. The face and all the under parts are pure silken white, but sometimes in the female the breast is spotted or tinged with buff. The feet are but very barely covered with hair-like feathers. The figure is from a specimen in my own collection.

IMMATURE birds are duller and paler in colour.

YOUNG in down are white, the down similar to swan's down.

VARIETIES similar to one in Mr. Hancock's collection are not very rare, in which "the whole of the under parts, which are usually white, are of a dull tawny colour, as are the legs and thighs; the face is also tinged with the same colour, and the upper parts have a tawny richer than usual" (Birds of Northumberland and Durham). Meyer records one pied with white, and another with the ground colour white with the markings only very faintly distinct.

Note.—The note of this species is a sort of harsh screech, hence it is often called the screech owl. The young birds, while they are in the nest, make a kind of snoring noise, which is also made by the old birds.

Flight.—This bird loves to fly in the twilight or moonlight, wheeling softly and without the slightest noise about the stack-yard, or over a certain track of ground. It generally flies low, and at intervals suddenly drops upon some unwary mouse or rat, which it clutches and bears off to its young brood.

Migration.—This is a resident bird, frequenting the same places all the year round.

Food.—The food of the Barn owl consists almost entirely of rats, mice, and their allies. It is thus a bird of very great service upon a farm, where it should always be encouraged. But give a dog a bad name and you know the consequences: and the poor Barn owl has obtained a bad name by being seen too frequently in the vicinity of the dovecote. Thompson and others record instances of this owl breeding in dovecotes, and in no one instance has it been accused of molesting the pigeons. The remains of from twelve to fifteen rats and mice have been counted as the results of a single night's repast, and in the stomach of all I have examined, I never found the remains of any birds, though Mr. Bond informs me he has found skulls of sparrows, &c., in their castings. Bishop Stanley records an instance of a person who kept pigeons and had the young ones frequently destroyed, as he thought, by a pair of owls which frequented the premises. So one moonlight night he determined to be revenged, and stationing himself near the dovecote with his gun, he awaited his victim. Presently one of the owls came out of the pigeon-house and was flying away with something in its claws. Bang went the engine of destruction, and down came the poor bird.

The man had murdered his best friend, for he found that the object it was carrying away was an old rat. This bird has also been known to feed on fish.

IN CONFINEMENT this owl is very interesting and also useful, as may be seen from the above. It is easily tamed, especially if taken from the nest when young, and becomes attached to those it knows if treated with kindness and affection. Tame ones have even been known to return after they have had their liberty given them, while others have brought wild birds to share in their fare.

Habitat.—The vicinity of old barns, churches, ruins, and ivy-clad trees seem to be the favourite haunts of this species. It is distributed more or less over all the British Isles.

ABROAD this is the most universally distributed of the British *Raptors*, being found

nearly all over the world, except the extreme north, the eastern part of Asia, and the southern point of the American continent.

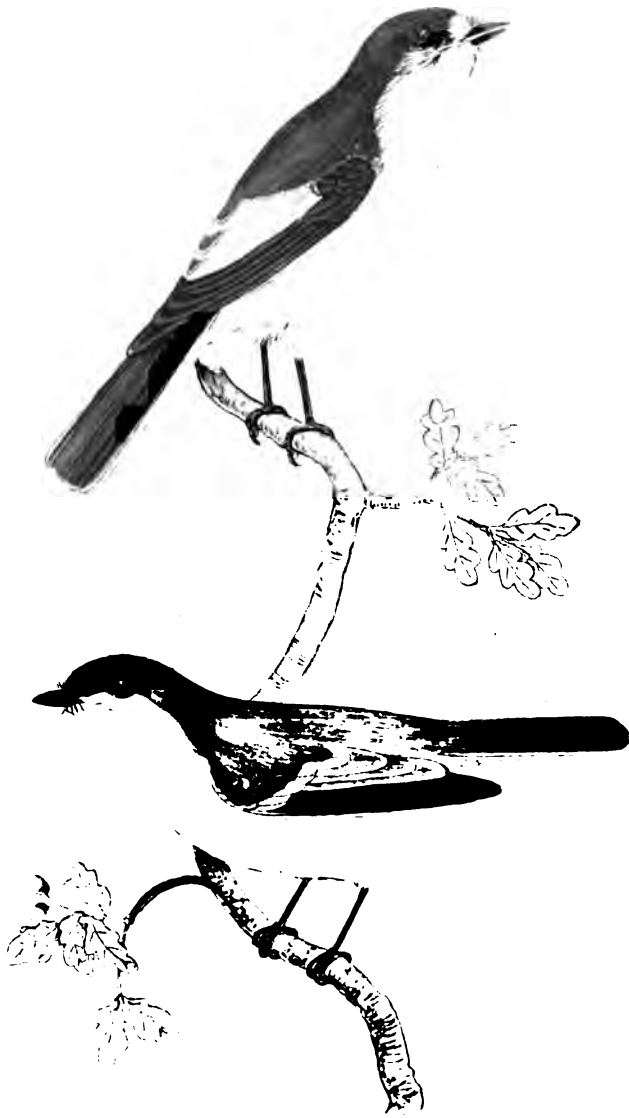
Nest.—The nest is placed in a hole in some old ruin, generally among ivy, or in an hollow tree. Very little material is used in its construction; a few twigs or bits of hay or straw being all the birds require, but the castings soon accumulate and form a bed.

Eggs.—The eggs seem to be laid in pairs. Two eggs will be laid and sat upon, and just before they hatch two more will be laid; when the first two are hatched, the warmth of the young birds serves to hatch the second pair, and a third pair are laid and hatched in a similar manner. Thus the time of the old birds can be employed in providing food. The eggs, like those of all the owls, are white.

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BARN OWL



PIED FLYCATCHER

Genus II. *Muscicapa*.

MUSCICAPA, *Musca* (L.), a fly; *Capio* (L.), I seize.

Only two species are native of Britain, and two or three others have occurred 'as visitors from the Continent. The bill is rather stouter than in the warblers. They

live almost entirely upon flies, which they capture on the wing, and will sit for hours together upon one particular branch, sallying forth every time a fly comes in sight, and returning again to the same branch.

21. PIED FLYCATCHER.

Muscicapa atricapilla, Linn.

ATRICAPILLA.

Size.—Length, 5 in. ; expanse, 8 in.

Plumage.—The adult male, during the breeding season, has the bill, feet, and upper parts black ; a white band across the forehead ; part of the secondaries and the outer tail feathers white. Eyes brown. After the autumn moult the black assumes a slaty brown tint, and in this state closely resembles the female, and as such is figured in Gould's great work ; but it may easily be distinguished by the white band on the forehead.

The ADULT female has the dark parts slaty grey, the white duller, and the band on the forehead wanting.

The IMMATURE bird is described as having the upper parts grey as in the female, but the feathers are slightly edged with darker colour. Those on the rump, sides of head and wing coverts, have each a pale spot near the extremity ; under parts as in the female. This state of plumage only lasts five or six weeks, when it becomes like the female bird.

Note.—The note is described as a low warble, commencing "zic, zic, zic," very like that of the Lesser Whitethroat. It has also a song which is both sweet and melodious.

Migration.—The Pied Flycatcher is a summer visitor to these Islands, though

rarely observed breeding. It regularly breeds in the North of England.

Food.—The food consists of insects, principally flies captured on the wing ; it is also stated to eat berries, such as currants, elders, and cherries.

Habitat.—Found sparingly in various parts of England, more particularly in the North-west. Rare in the Eastern and middle counties of Scotland, and very rare in Orkney. In Ireland it seems unknown.

ABROAD it is common in most parts of Europe, but only a summer visitor to the extreme north, though occurring as far as Lapland.

Nest.—The nest figured, as well as the birds and egg, were taken by Mr. J. Varley, on the river Gheft, in Cumberland, in 1880. The was built in a wall, and composed of dry grass blades and withered leaves, lined with a very few horse hairs and woody fibres. They will also build in hollow trees, and an instance is copied into almost every book on nesting, of a pair having taken forcible possession of an aperture occupied by a colony of bees.

Eggs.—The eggs are four or five, very rarely six in number, pale blue-green, much lighter than those of the Redstart, which builds in like situations.

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PIED FLYCATCHER.

Genus III. Cinclus.

CINCLUS, (Gr.) a lattice, probably from the markings on the back of the bird. This genus has only one representative in Britain, and few other species exist abroad. The

bill has a ridge along the upper edge, moderately long and slightly turned upward. Tail and wings short; claws long; the body very plump and round.

23. DIPPER.

Cinclus aquaticus, Bechst.

AQUATICUS, from *aqua* (L.) water, the bird being always found about water.

Size.—Length, about $7\frac{1}{2}$ in.; expanse, 12 in.

Plumage.—Bill blackish; eyes hazel; top and sides of head, and neck brownish black; back wings and tail sooty black, the feathers margined by darker colour; throat and breast white, suddenly changing to chestnut on the belly, and gradually changing to sooty black at the vent; legs horn colour. The sexes are very similar.

IMMATURE birds have the upper parts pale sooty black, the feathers margined with darker colour; breast and belly yellowish white, each feather margined with sooty (pl. 23, fig. 2).

VARIETIES.—One white specimen is recorded. There is also a variety of this bird found in Scandanavia, which is sometimes described as a distinct species, under the name of *C. melanogaster*. It has the usual chestnut on the belly replaced by sooty black. This variety is sometimes found in this country, being recorded from both Yorkshire and Norfolk.

Note.—Besides the ordinary note, a simple "chet," the dipper has a short, but pleasant song, which may be heard at all seasons of the year.

Flight.—The dipper has a strong, quick flight, generally in a straight line along the course of some stream, and has the habit as soon as it alights, generally upon some stone in the middle of the stream, of moving its tail after the manner of the wagtail.

Migration.—I think the bird is partially migratory, in some parts of the country at least—(F.B.).

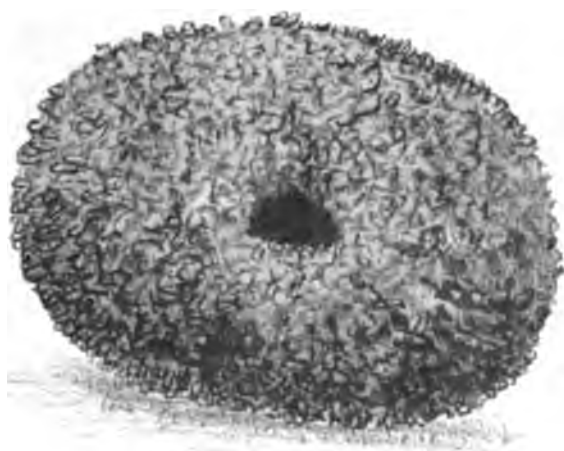
Food.—Larva of aquatic insects, water snails, worms, &c. The dipper has been charged by anglers with destroying the spawn of fishes, and, in consequence, has been persecuted, and rewards have been offered, and, I believe, still are, in some parts of Scotland, for its destruction. It has been proved, however, by dissection of the birds at all seasons of the year, that it seldom takes spawn, but feeds upon the larvæ of aquatic insects, which would be much more likely to injure the spawn than the bird itself. Such cases as this are very strong in favour of natural history forming a part of our system of education.

Habitat.—Mountain streams, in England, Scotland, Wales, and Ireland; most numerous in the north, being a common bird in all the Scotch highland burns. It has the power of sinking to the bottom of a pool and rising again at some distance; it has been seen to rise to the surface in the middle of a pool and take flight.

ABROAD.—It is common in most of the hilly parts of Europe.

Nest.—The nest is very large for the size of the bird. It is round, with a hole in one side, and is composed of moss, lined with dry leaves. It is placed in a crevice of a rock or bridge, generally near some cascade. I have known it placed behind a waterfall, where the birds had to go through the water each time of approaching or leaving the nest.

Eggs.—Five or six, pure white.



DIPPER

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SPOTTED FLYCATCHER

22. SPOTTED FLYCATCHER.

Muscicapa grisola, Linn.

Y gwybedog (Anct. Brit.)

GRISEOLA, from *griseus* (L.) grey.

Size.—Length, $5\frac{1}{2}$ in.; expanse, $7\frac{1}{2}$ in. to 8 in.

Plumage.—Bill nearly black; the lower mandible yellow at the base, with a few bristles about the mouth; eyes hazel; the whole of the upper parts, including the tail, are pale greyish brown; under parts greyish white, tinged with grey brown on the breast and throat, where each feather has also a dark stripe down the centre. Both sexes are similar.

THE IMMATURE or nest plumage, which only lasts for a few weeks, has on the tip of each feather a yellowish white spot.

VARIETIES.—An *albino* was captured some years ago near Gravesend in Kent, and Mr. Bond has one, very pale wood brown, with the markings of a rufous colour, killed in Sussex. Varieties, however, are rare.

Flight.—This bird delights in the vicinity of shady trees, where it flits about in a kind of butterfly-like flight, incessantly in quest of insect life.

Migration.—A regular summer visitor to this country, seldom reaching us before the middle of May, and departing again about the end of September.

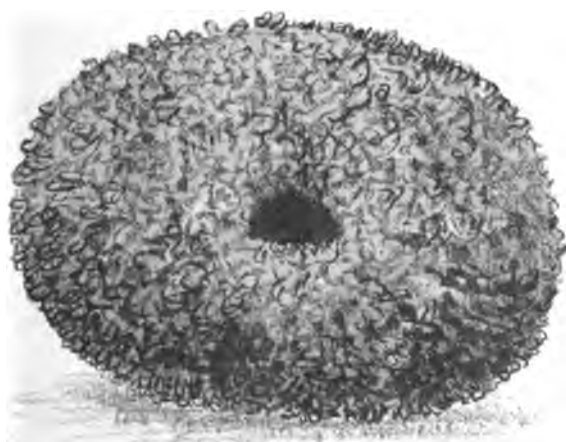
Food.—Consists almost entirely of flies and other insects, but sometimes a few berries such as those of the mountain ash, are eaten.

IN CONFINEMENT.—I know of no case of this bird being kept in captivity.

Habitat.—This bird is not uncommon in most parts of England, Scotland, and Ireland, but rarer in the north than in the south. It frequents woods, orchards, plantations, and similar places.

ABROAD.—It is found throughout Europe, and in many parts of Africa, and Asia. Dresser says it is a regular visitant to western continental India.

Nest.—The nest seems to be begun immediately on the arrival of the birds at their breeding places, and sometimes two broods are reared in a season. It is composed of moss, mixed with a few bits of stick, dry leaves or roots, lined with fine grass and horsehair, sometimes also with a few feathers. Mr. Bond has one with the outer parts formed principally of fine seaweeds, and lined with feathers, dried grasses, and hair, taken in the Isle of Wight. But the prettiest nest he ever saw was composed almost entirely of dead flowering racemes of the evergreen oak, the lining of hair and dried grasses. This nest was taken at Hampstead. Generally the site chosen is among a few small branches against the bole of a tree, or in a tree trained against a house side; but sometimes very odd situations are made choice of; such, for instance, as tops of lamp-posts, in inverted tree pots, various places in and about outhouses, or on a beam in a cow-house. On one occasion a nest was placed on a hoe which hung in a shed. When the hoe was wanted the nest was taken down and replaced again when the implement was done with; an arrangement to which the bird did not seem to object, for it reared a brood of young (Zool., p. 3577). I once found a flycatcher's nest placed inside that of a thrush upon the ledge of a rock in North Yorkshire. The thrush's nest contained two eggs under the other nest, and it would almost seem as if the flycatchers had taken forcible possession. Gilbert White relates an instance of a pair having built upon a naked bough, and that when the



DIPPER

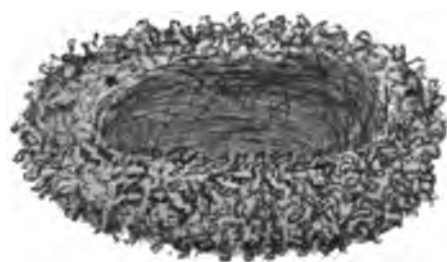


hottest weather came on, the heat of the sun was enough to have scorched the young brood, had not the old birds had the sagacity to hover above the nest during the hottest parts of the day, panting for breath themselves, but protecting the young ones from the scorching rays.

Eggs.—Four to six eggs are laid, greyish or greenish-white, spotted or mottled with yellowish or reddish sienna spots or

blotches. Sometimes the spotting is fine and forms a zone round the thick parts; at other times it is in blotches, and then more of the ground colour is shown.

VARIETIES.—"I have had one entirely white. I took a nest in Cambridgeshire in 1864 with four eggs entirely rich cream colour without any spots or markings. I have seen eggs similar to those of the pie-bird, also without spots or marks.—F.B."



C.S.G.

SPOTTED FLYCATCHER



MISSIL THRUSH

Genus IV. Turdus.

Turdus (L.), a thrush.

The birds composing this genus are all of moderate size. The beak rather large, upper ridge curved to the point; the wings have the third and fourth quill feathers longest; tarsus rather long. Six species are

native of this country:—one summer visitor (partial), two winter visitors, and three residents. Two or three other species have been taken in this country either as stragglers from distant lands or birds escaped from confinement.

24. MISSEL THRUSH.

Turdus viscivorus, Linn.

Penn y llwyn (Anct. Brit.)

Viscivorus.—From *viscum* (L.) mistletoe, and *corvo* (L.), I devour.

Size.—Length about 11 in.; expanse, 1 ft. 7 in.

Plumage.—Bill brown, lower mandible yellow at the base; eyes hazel; the whole of the upper surface is clove or olive brown; the wings, wing coverts, and tail slightly paler colour, edged with wood brown; the outer tail feathers with a dull white spot; under parts white, tinged with yellow, and blackish spots; legs and feet pale brown. The sexes are similar.

THE YOUNG, when they leave the nest, have a streak of pale colour down the centre of each dark feather on the back, and the wing and tail feathers are edged with the same colour. Under parts similar to the adult, but lighter in colour. (See lower figure, pl. 24.)

VARIETIES.—White and pied varieties have been recorded. A white one was killed near Exeter in 1851. Mr. Bond has a very pale variety, which is represented in the upper figure, pl. 24, killed near Plymouth in 1873. Cases of melanism occur in this species. There is an example in the British Museum.

Note.—The ordinary note is a harsh scream, uttered when the bird is alarmed, as by intruders approaching too near its nest. The song is commenced in January,

and is always uttered from the top of a tall tree. It is loud and clear, but has not a great variety of tone. It occasionally sings when on the wing.

Flight.—Rather heavy, produced by a series of flappings and periods of cessation, which causes an undulating flight.

Migration.—In this country the Missel Thrush is resident throughout the year, but their numbers seem to be augmented during the winter, probably by arrivals from the extreme north.

Food.—Snails, slugs, worms, and caterpillars, also berries of almost any kind, including those of the mistletoe, from which probably the bird derives its name. During fruit season the Missel Thrush is destructive in the orchard, but at other seasons it destroys large quantities of vermin. It has also been known to devour young birds.

IN CONFINEMENT this bird may easily be reared from the nest on bread and milk; afterwards it should be fed upon German paste, also barley meal and wheaten bread moistened with water, with a little lean beef or hard-boiled eggs to vary the diet. It should have plenty of room, and water to drink and bathe.

Habitat—Common in all parts of England and Ireland. For many years this bird has been increasing in numbers in Scotland, but is still rare in the extreme

north. It frequents orchards, coppices, &c., open downs and heather, and after the breeding season the young associate with their parents and form small companies.

ABROAD it is common throughout Europe, numerous in Turkey and Asia Minor, also parts of Africa, Himalayas, and Cashmere. Those found in India are, by some, considered distinct. Moves from the north southwards during winter.

Nest.—The nest is begun early in the season, and is generally placed in a thick fork at some distance from the grown. It is composed of coarse dry grass, with bits of moss, lichen, wool, or any other available substances, fastened together internally with mud, and lined with fine grass or fibrous roots.

Eggs—The female begins to lay early in March, and the number of eggs vary from four to six. Their colour is generally pale bluish green, spotted with ash grey and red brown (pl. xxiv., fig. 6). The old birds are very pugnacious during the time of incubation, and very noisy if any one approaches too near the nest.

VARIETIES.—The eggs of this bird are subject to great variety. Figs. 1, 2, and 3 are from drawings kindly sent me by Mrs. Battersby, taken from eggs in her collection. Fig. 4 is from Mr. C. S. Gregson's collection, and he has another entirely pale blue without any spots. Fig. 5 is from my own collection.



MISSEL THRUSH

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FIELDFARE.

25. FIELDFARE.

Turdus pilaris, Linn.

Bjork trast (Sweden).

Baiferastes (Lapland).

PILARIS.—"Like a ball" (Nich. Dict.).
do not see what reference this word has
to the fieldfare.

Size.—Length, 10 in.; expanse, 1 ft. 5 in.

Plumage.—Bill brownish at the tip
and yellow at the base; eyes dark brown;
iris yellow; top of head slaty blue, each
side with a black centre; a light streak
under the eye, and a dark one from the bill
under the eye; back of neck and ear coverts
slaty blue; back and wing coverts brown;
tail slaty blue; tail bluish black; primaries
blackish, edged with paler colour; throat,
breast, and flanks buff, with blackish spots
and markings; belly white; legs dark brown;
tarsus black. The sexes differ very slightly.

Young.—The young of the fieldfare is
marked very like the young of the missel
thrush of the same age, except darker.

VARIETIES.—Several pied varieties are
recorded, and do not seem rare. One is in
Mr. Bond's collection, and another very
handsome pied bird is in the possession of
Mr. T. H. Briggs. Others are recorded by
him as having the whole colour of a
pale tint. Mr. Bond has seen two speci-
mens very dark, approaching melanism.

Note.—The ordinary note is "Yack,
Yack" uttered both on the wing and after
the birds alight. During the breeding sea-
son they utter a harsh chatter, and Yarrel
says that they have also a song which is
fit and melodious.

Flight.—The flight is easy, slightly
undulating, and performed in companies of
from ten to fifty generally, but sometimes
very large flocks numbering a thousand
or more.

Migration.—This species is a true
migrant, arriving in this country about the
middle or end of October, and remaining to
the end of April, middle of May, or even
June. When they leave this country they
go to the pine forests of Norway and Sweden,
Lapland, &c.

Food.—The food, like that of the other
thrushes, consists of insects, snails, worms,
and fruit. In this country they seem par-
ticularly fond of the fruit of the hawthorn.
In hard winters they sometimes do consid-
erable damage to turnips by picking holes
and feeding upon the roots.

IN CONFINEMENT.—Yarrel says it soon
becomes reconciled and sings agreeably.

Habitat.—Very common throughout
this country in winter, frequenting meadows,
&c., on being disturbed flying to the hedge-
rows and isolated trees, and is generally
very wild, and difficult of approach.

ABROAD it is found throughout the conti-
nents of Europe and the northern parts of
Asia, migrating southward in the winter as
far as parts of Africa. Rare in India.

Nest.—This thrush generally breeds in
colonies, but occasionally singly, in pine
forests. The nest is composed of sticks and
coarse grass with a little clay, and lined
with finer grass. It has been recorded as
having been bred in this country, but probably
under a misconception, as no authentic eggs
or nests are known to have been taken in
this country.

Eggs.—From four to six eggs are laid,
described as subject to much variation,
resembling those of the ring ouzel, black-
bird, redwing, or missel thrush.

XXV



FIELDFARE.



SONG THRUSH.

26. SONG THRUSH.

Turdus musicus, Linn.

Aderyn Bronfraith (Anct. Brit.)

Musculus (L), Tuneful.

Size.—Length, about gin.; expanse 1ft.

Plumage.—Bill dark horn colour, lighter at the base of the lower mandible. Eyes hazel brown. A few black bristles before the eye, and longer ones at the gape. Top of head and whole of upper surface brown, tinted with greenish; wing coverts tipped with paler colour. An indistinct dark streak runs through the eye, and a lighter one over it. Under parts bluish white, tinted with buff at the breast, and spotted with dark brown. Under wing coverts orange, paler than in the Redwing. Legs and toes yellowish brown. The sexes are similar.

THE YOUNG when they leave the nest have the dark parts varied with lighter colour, as in the Missel Thrush, but not so distinct.

VARIETIES.—Many white and cream-coloured ones are recorded. A young bird in my own collection is pure white. Two others are recorded by Mr. Gunn (Nat. I. pp. 145 and 170). Another is reported on the same page, having "crown of head, back, and upper surface, light reddish brown, under parts white, the breast with spots of a pale reddish brown, bill and legs yellow." Another, reported in the same place, had the upper parts pale yellowish brown, the feathers on the back and wings edged with yellowish; throat and breast yellowish, spotted with light brown; abdomen white." Another is reported by the same gentleman, and in the same magazine (Vol. I. p. 207), having the "upper parts yellowish brown, margins of the feathers darker; throat white; breast and sides very pale yellow; margins of feathers

darker; abdomen white." A curious variety is figured upon the plate, from Mr. Bond's collection.

Note.—This bird is one of our richest songsters, beginning generally in February. Its notes are loud, clear, and flute-like, usually a set of from four to six notes are run over three or four times, and then varied in a new arrangement, which are again run over several times, then varied again.

Flight.—Strong, performed by quick flappings of the wings.

Migration.—Resident. Their numbers, however, seem to be augmented on the approach of winter, probably by arrivals from the north, which depart again before the breeding season.

Food.—Berries, fruit, insects, worms, and snails. The shells of the latter are broken against a stone selected by the bird for that purpose.

IN CONFINEMENT this bird is a great favourite on account of its beautiful song. It may easily be reared from the nest upon bread and milk. After five or six weeks it should be gradually accustomed to bread crumbs and lean beef. When older it may be fed upon barley meal made into paste with milk and water, with occasional bits of lean meat, hard-boiled egg, snails, or worms. The cage should be large and have plenty of coarse sand and water for drinking and bathing.

Habitat.—Common throughout the British Islands, frequenting gardens, woods, plantations, and shrubberies. It, however, is said not to occur in the Shetlands.

ABROAD it is found throughout Europe and the western portion of Asia. Abundant

in some parts of Africa during the winter. It has also lately been introduced into Australia.

Nest.—The nest is placed in a holly or other bush generally about five or six feet from the ground. Sometimes it is placed at a greater elevation against the side of a tree, and occasionally upon the ledge of a rock, even sometimes upon the ground. It is composed of dry grass and moss, lined very smoothly inside with a coating of mud and fibre of rotten wood or cow dung. The nest is commenced early in March or even sooner, and in fine weather is completed within a week.

Eggs.—From four to six eggs are laid, blue-green, with a few largish black spots, generally placed at the large end, but occasionally at the smaller end.

VARIETIES.—Sometimes the spots are entirely absent; they also vary much in size. A curious shaped one (fig. 2) is figured from Mr C. S. Gregson's collection, and two more from the same, marked in an unusual manner (figs. 1-3). A remarkable variation is recorded, (Zool. 1875), having the ground white with dark red spots.



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SONG THRUSH.



RED WING

27. REDWING.

Turdus iliacus, Linn.

Rodvinge trast (Sweden).

Miestag rasters (Lapland).

ILIACUS, *Ilia* (L.). The flanks—probably from the red colour being on the sides or flanks.

Size.—Length, about 8½ in.; expanse 1 ft. 2 in.

Plumage.—Somewhat similar to the Song Thrush, but the upper parts much darker, the light streak over the eye more distinct, less buff upon the breast, and the feathers under the wings, *brick red* in the Redwing, and yellow in the Thrush.

THE YOUNG is spotted and marked like the young of the common Thrush, but darker.

VARIETIES. A white one is recorded, *Zool.* Vol. xxi., p. 8484. One which lately belonged to Mr. Alfred Beaumont, of Huddersfield, was very similar in colour to the variety of Song Thrush, figured from Mr. Bond's collection.

Note.—The ordinary note of the Redwing is a rather long drawn sibilous whistle, often used when on the wing. Just before the breeding season, however, it has a song which is described as very melodious. It is said to be the most beautiful songster of the forests of Northern Scandinavia, where, from its habit of singing in the night, it is known as the "Nightingale." It has sometimes been heard singing in this country.

Flight.—The flight is performed by quick flappings of the wings, and periods of cessation. In this country they remain somewhat in companies, either by themselves or with Fieldfares.

Migration.—This species is migratory between this country and the north of Norway and Sweden. They arrive here at the end of October, and depart again at the end of April.

Food.—Insects, worms, slugs, &c., form the chief part of its food; in hard weather it will eat haws and other berries.

IN CONFINEMENT it may be treated like the Thrush, except that it should be kept in an out-door aviary.

Habitat.—Very common in winter in all parts of Britain.

ABROAD it is found in the greater part of Europe, breeding in the north; it moves to the south on the approach of winter, and is then found in parts of Asia and Africa.

Nest.—The breeding home of the Redwing is in the pine forests of the north. The nest is smaller and more neatly built than that of the Fieldfare, and is composed of moss, dry grass, roots, &c., mixed inwardly with clay, and lined with fine grass. It is placed in a bush, and often near to some stream, and is commenced as soon as the birds arrive at their breeding place. It has been reported as breeding in England, but it is doubtful if the reports are correct.

Eggs.—From four to six. They somewhat resemble those of the Fieldfare, but Mr. Wheelwright gives the following distinction:—"The egg of the Redwing is always smaller, neater, and purer in colour than that of the Fieldfare. It has, moreover, when fresh, a peculiar green tinge, which, however, fades soon after the egg is blown."

XXVI



RFDWING.



BLACKBIRD

28. BLACKBIRD.

Turdus merula, Linn.

MERULA (L.)—a blackbird.

Size.—Length, 10 in.; expanse, 1 ft 3 in.

Plumage.—Adult male jet black; bill and eyelids bright orange; eyes hazel; legs dark brown. Fig. 1.

THE FEMALE is very variable and difficult to describe. The plumage is generally umber brown; the chin and under parts lighter brown, and more or less spotted or striped. Sometimes the under parts are tinged with orange. The bill is only yellowish at the base in old birds. Fig. 2.

THE YOUNG at first are similar to the female in colour but duller, and the full adult plumage of the male is not attained until the second or third year.

VARIETIES frequently occur, generally pied with white. A very pretty one of this form is given upon the plate from Mr. Bond's collection (3.) One in my own collection is entirely of a pale grey (4), and another of a reddish clay colour is probably a female (5). A female is recorded of a cream colour, with yellow bill and feet. Pure white specimens also occur. Several varieties are recorded in the *Naturalist* (1864), vol. i., p. 146: one a male, all reddish brown; another male having the upper surface light buff, and the under surface cream colour; one pure white.

Note.—The blackbird is a songster a little inferior to the thrush. Its notes are more varied, though not so musical, yet in other respects similar. It has been known to imitate the notes of other birds. Some years ago, one which frequented the Zoological gardens learned the note of the cock jungle fowl so well as to be undistinguishable. The song is generally commenced about the middle of February. It has also a chatter, used when alarmed, and a call

note resembling the syllables "chuck, chuck," generally used when it takes wing.

Migration.—Resident throughout the year, though more numerous in the winter, probably caused by arrivals from the north.

Flight.—The blackbird flies generally in short jerks, rarely leaving the cover; and if obliged to do so in order to cross a park or field, the flight across is straight and hurried.

Food.—The food of this bird consists of insects, worms, snails, seeds, and fruit. It makes havoc in the fruit garden when in season, but fully compensate for the trouble of keeping it out by the large quantity of caterpillars and other insects destroyed during the time the young are in the nest. In the winter it feeds on the berries of the hawthorn mountain ash, hips of roses, and renders service to gardeners by destroying any kind of vermin found in the garden.

IN CONFINEMENT the blackbird is a favourite bird, and will learn to whistle tunes. It should have a roomy cage, but is best, as indeed most birds are which are kept in confinement, in an aviary where it can have plenty of room and water to bathe. One is recorded which belonged to a lady, which came and perched upon her pillow every morning and awoke her with a song.

Habitat.—Common throughout Britain, frequenting woods, shrubberies, gardens, and similar places.

ABROAD it is found throughout Europe, in the northern parts of Africa, and Western Asia.

Nest.—The nest is placed in a bush, hedge, against a tree trunk, on a bank, or even on the ground. It is composed of

small sticks and dry grass, plastered internally with mud, and lined with finer grass.

Eggs.—From four to six eggs are laid of a pale greenish blue, spotted with reddish brown. Sometimes the spots are fine and rank; at other times they are large, more like those on the egg of the ring ouzle. Generally they are more numerous at the thick end, but sometimes they are confined to the small end. Fig. 1 represents the general form.

VARIETIES.—Extreme varieties are not rare. Fig. 2 is from my own collection. Figs. 3, 4, and 5 are from specimens in Mr. C. S. Gregson's collection. Sometimes the red-brown spots are collected into a large brown patch at the large end. I have seen one with the ground colour nearly white. Others are recorded of a uniform pale blue, resembling those of the thrush, without spots. Mr. Doubleday noticed that most of the blackbirds in one part of Epping Forest laid blue eggs.



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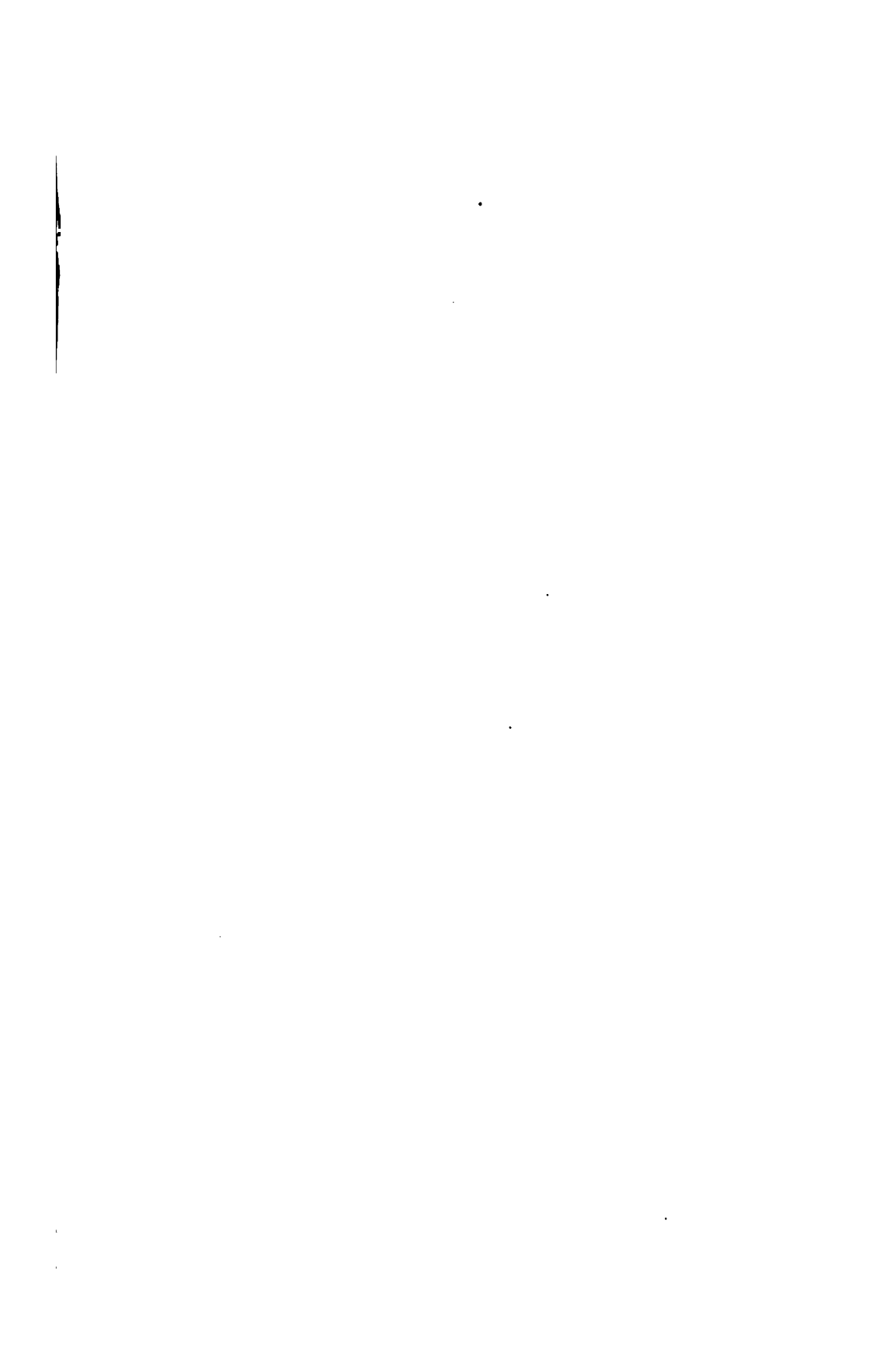
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RING OUZEL.

29. RING OUZLE.

Turdus torquatus, Linn.

TORQUATUS, (L.). Zoned or ringed; from the white mark on the breast.

Size.—Length about 11 in., expanse ft. 7 in.

Plumage.—Bill dark brown, with some yellow at the base; eyes dark hazel, eyelids yellow. The whole of the plumage is brownish-black, the feathers more or less margined with grey, especially on the wings; a white crescent-shaped patch across the breast; legs dark brown.

THE FEMALE has the grey margins of the feathers broader, and the white crescent narrower, and less pure. Old females are like the males, and young males are like the females.

THE YOUNG from the nest are marked very like the young of the missel thrush, but the ground colour, of course, darker. After the first moult in the autumn the young birds are dull brownish-black, the feathers on the upper parts margined with lighter colour, on the under parts the feathers are margined with dull white, and where the gorget should be the feathers are margined as in the upper parts; bill dark brownish-black; legs rather lighter. The lower figure represents the bird in this stage, from a specimen in my own collection.

VARIETIES.—I have seen several specimens with white feathers about the head, and Selby says that white and ashy grey ones have occurred.

Note.—The song consists of but a few notes, loud, sweet, and clear. It has also a note of alarm something like that of the blackbird.

Flight.—The flight is very similar to that of the blackbird.

Migration.—The ring ouzle is a summer migrant to this country. Its movements

are just the opposite to that of the fieldfare and redwing, coming here to breed and moving southward in the winter; hence, although it seldom breeds in the southern counties, it is seen there regularly in its spring and summer migrations.

Food.—The food of this species consists of similar fare to that of the last; it is particularly fond of ivy and juniper berries.

Habitat.—Not rare in mountainous places in the northern parts of the British Isles, breeding in all suitable places in the north, and visiting the cultivated grounds in the spring, and again in September after the breeding season.

ABROAD it is found in most of the hilly parts of Europe; in winter in North Africa, and rarely in some portions of Asia, but the chief resort in winter does not seem to be known.

Nest.—The nest is very similar to that of the blackbird, but is either placed upon the ground or very near it, generally on a sloping bank under a tuft of heather, or against a rock side; always low down, and at a place where herbage grows from the rock.

Eggs.—Generally four or five eggs are laid; they greatly resemble the eggs of the blackbird, but are generally rather blunter at the small end, the spots never so small as in some of the blackbird's eggs, and the ground colour brighter (fig. 1).

VARIETIES.—The eggs of this species seem rather subject to vary. Figs. 2, 3, and 4 are from Mrs. Battersby's collection. One is recorded with the whole of the large end chestnut brown, and the remainder clear blue. Mr. Bond has seen two or three light blue without any spots.



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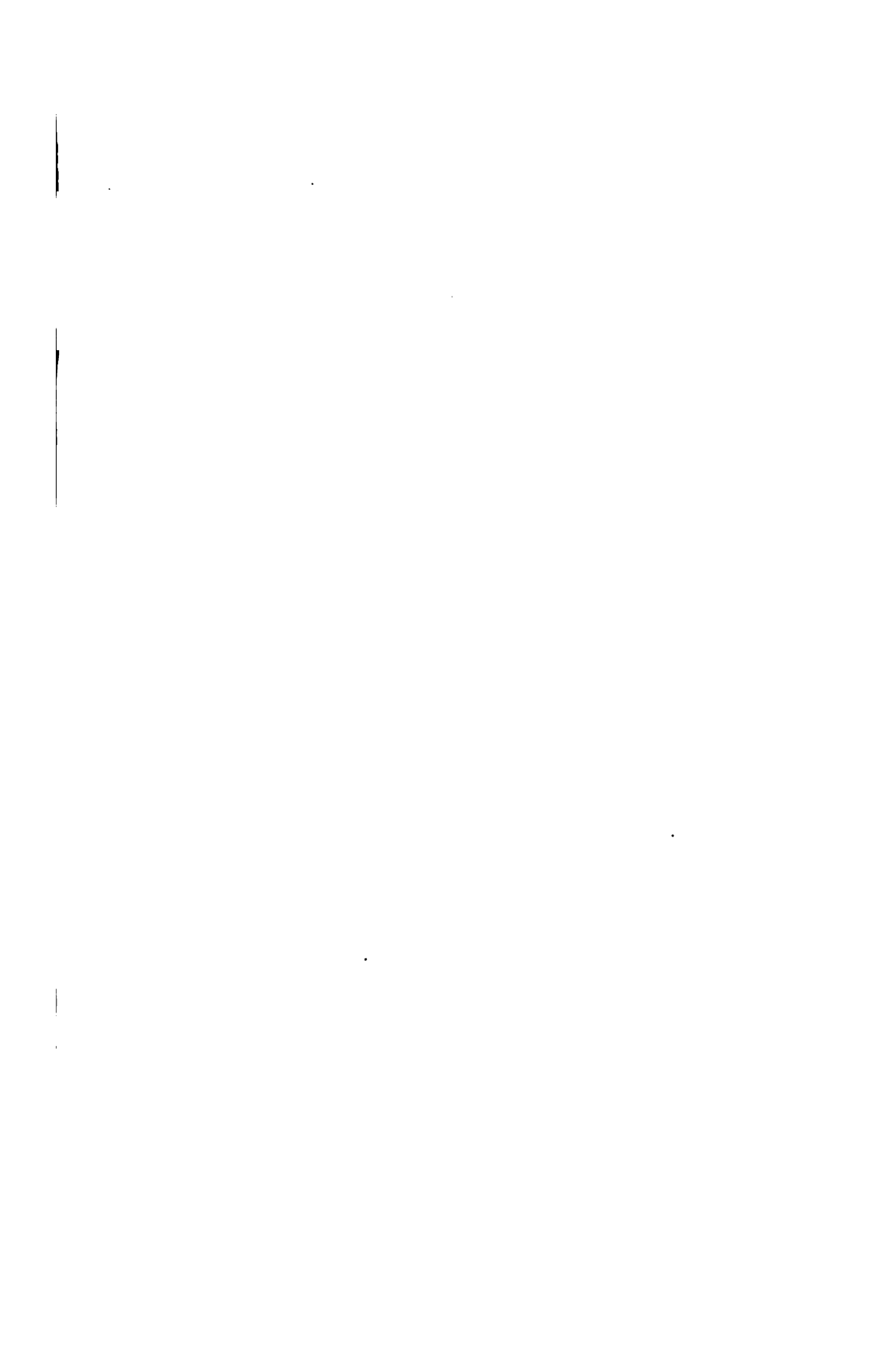


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3







HEDGE SPARROW.

FAMILY IV SYLVIADÆ.

This family consists of all the small soft-billed birds or warblers, generally very sombre in colour, but excellent in song.

Genus I., Accentor, Flam.

ACCENTOR.—

The members of this genus are plain-coloured, generally brown; the bill tapers almost gradually to the point; first quill

feather exceedingly short, the third the longest; the wings only reach to the base of the tail. One species is native, and another an occasional visitor to this country.

30. HEDGESPARROW.

Accentor modularis, (Linn).

MODULARIS (L.) to chant or warble.

Size.—Length, 6 in. to 6½ in.; expanse, 8½ in.

Plumage.—Bill and legs reddish horn colour; eyes dark brown; head and under parts sooty black, tinged with brown on the sides and ear-coverts; back wings and tail brown, each feather darker in the centre.

THE FEMALE is generally slightly spotted about the head and breast.

YOUNG BIRDS are lighter in colour and more mottled, but change to the adult garb the same year.

VARIETIES of this species are not uncommon. One, entirely sooty black, is given on the plate from a specimen killed by myself at Almondbury Bank, near Huddersfield. It is now in Mr. Bond's collection, who has also white, pied, and cream-coloured varieties. Two varieties are reported by Mr. Gunn in the *Naturalist* (1864), vol. i., p. 146, as having been obtained in Norfolk: one being pied with white about the head, and the other "being of a yellowish brown on the upper parts, the under surface of a pale slate colour, inclining to greyish under the throat." Yarrell records one with the "head, neck, body, and wing-coverts dull white, varied with a few markings of the natural brown; the wing and tail feathers pure white; beak and legs flesh colour."

He also records another of a "uniform reddish buff."

Note.—The song of the hedgesparrow is only short, composed of a few notes, yet particularly soft and sweet. It commences to sing early in spring, often in January, and continues up to the time, when the young demand all the parental care. It has also a call-note resembling "che. che." Occasionally sings in the night-time.

Flight.—The flight is generally for short distances only. When it alights, it hops from branch to branch, or upon the ground, flapping its wings and uttering its plaintive call note.

Migration.—Resident throughout the year; in winter, however, it approaches nearer to the habitations of man.

Food.—The food consists of small insects, seeds, bread crumbs, and almost any eatable matter. When the young are in the nest, large quantities of Caterpillars are destroyed.

IN CONFINEMENT.—It is an interesting bird in an aviary, for its sociable habits and its early song.

Habitat.—Common in all parts of Britain, except the extreme north, where it is only an occasional visitor, or perhaps resident in more diminished numbers.

ABROAD.—Is found in most of the countries in Europe, and has been noticed in Persia, and Asia Minor.

Nest.—The nest is placed in a hedge or low bush, and is rather shallow, composed of moss with bits of sticks, or straw sometimes, or wool lined with hair, or occasionally lined feathers. The nest of this bird is much used by the cuckoo.

Eggs.—From four to six, very bright bluish green, very uniform in colour.

VARIETIES.—I never saw a variety except in size—odd specimens sometimes occur as small as peas, probably first eggs. One is recorded (Zool., p. 434) of a bluish white colour, mottled and speckled with light brown, and much rounder than usual.

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HEDGESPARROW.



ROBIN
3 *Mr. Bond's Variety.*

Genus II.—*Sylvia*, Linn.

SYLVIA.—*Sylvia* (L.), forest.

The members of this genus are real insect feeders. The bill is slender; wings rather short; legs and toes long and slender. They are all song birds, some of them

exceedingly rich in song. All are more or less birds of passage, mostly visiting this country to breed. Twenty species are native of this country, and eight or nine others have been obtained as accidental visitors.

31. ROBIN.

Sylvia rubecula, Linn.

RUBECULA.—*Ruber* (L.) red.

Size.—Length, 5½ in.; expanse, 9 in.

Plumage.—Bill and eyes black; top of head and back olive brown; tail and wings rather darker; greater wing-coverts tipped with buff; throat, breast, sides of neck, and round the eye orange red, encircled above by bluish grey; belly white; legs brown. The sexes are similar.

THE YOUNG before their first moult are brown, mottled with yellowish (fig. 2).

VARIETIES.—Mr. Bond has one pale drab, lighter on the back; another with white tail and wings; one slaty colour with ochre-coloured breast; one with white cap shot in Norfolk; and another white faintly tinged with local colours in different parts. Two are reported from Norfolk (Nat. (1864) i., p. 164), one "of a bluish slate colour, lighter on the breast and abdomen;" and the other "white, mottled with small patches of its usual colour." Another is recorded from the same county (Nat. ii., p. 26) having "the surface of its head, neck, back, and upper wing coverts dull yellow; the red throat and breast much paler than in ordinary specimens; upper surface of wings and tail of a pale yellow, gradually inclining to white at the tips of the quill feathers; the shafts of the same also white; under surface of wings and tail pale yellowish brown; belly white; flanks, thighs, and vent of a pale yellowish tint; iris light hazel; bill and legs pale yellow.—Female." Yarrell records having "seen one in which

the part usually coloured red was a light bluish grey, the back and wings bluish green." A dun variety is reported (Zool., p. 8949), and numerous other pied ones are recorded. One of Mr. Bond's varieties is figured.

Note.—The robin has a sweet and pleasing song, though composed of a very few notes. Its autumn song generally commences during the latter half of August and is continued far into the winter. It also sings very late in the evening.

Migration.—The robin draws nearer to the habitations of man as winter approaches, and some leave England after the breeding season.

Flight.—The flight is rather quick, but only for short distances.

Food.—The food of the robin consists of insects, such as caterpillars and flies, bits of bread crumbs and kitchen refuse, also small fruits, such as currants, blackberries, elderberries, &c., &c.

Habitat.—Common in all parts of Britain, frequenting hedge banks, woods and gardens. In winter they approach human habitations in search of food, and will become exceedingly familiar, entering houses, and even hopping about the table where the family are assembled. When winter is over they seek their natural food in their usual haunts; but the same bird will again return to the house where it was welcomed before.

ABROAD it is found in all the temperate countries of Europe, North Africa, and Western Asia, also Malta, The Canaries, and Madeira.

Nest.—The nest is generally placed in a cavity on a bank, in a place where it is protected or hid by herbage or roots. Sometimes very strange situations are made choice of by these familiar birds: they have been known to build on the curtains of a bed, on a shelf in a room, in flower pots, in a human skull, and in various other queer

places. The nest is composed of dry stems and leaves of plants, with a little moss, and lined with hair.

Eggs.—Five eggs are laid, sometimes six. They are very pale yellowish grey, with indistinct pale red-brown spots (fig. 1.)

VARIETIES.—These eggs vary much in the intensity of the spotting. Sometimes they are pure white without any spots. Figs. 2 and 3 are from eggs in Mrs. Battersby's collection, and fig. 4 is from my own collection.

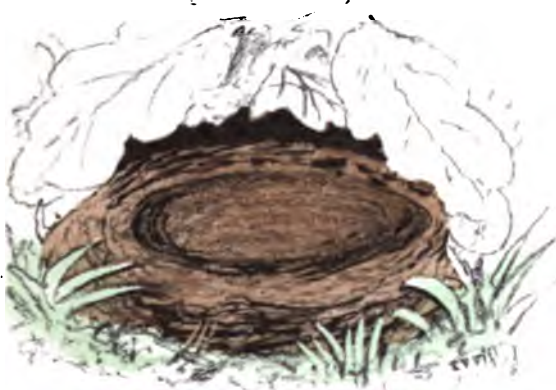
XXXI



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ROBIN



REDSTART

32. REDSTART.

Sylvia phainurus, Linn.

PRÆNICURUS, Phœnix (Gr.) = Purplish-red.
♂ () = A tail.

Size.—Length, 5½ in. Expanse, about 10 in.

Plumage.—**MALE.** Bill black. Eyes brown. A black patch begins above the bill, extending over the eyes, and covering the whole of the throat and breast. Forehead white. Top of head and back bluish red colour. Wings brown. Rump and outer tail feathers bright orange red, centre feathers brown. Under parts orange red, whiter towards the vent. Legs dark brown.

THE FEMALE is without the black breast, and also the white forehead. The upper parts are greyish brown; under parts brownish, lighter towards the vent. Rump and tail red, but not so bright as in the male. Very old females are said to resemble the males in colour.

IMMATURE males, that is after their first moult, and adult males in winter have the black and red less pure, and the feathers edged with white. The immature ones are also without the white band on the forehead, or it is very faint.

THE YOUNG, before the autumnal moult, resemble the young of the Robin, being dusky brown, each feather having a pale spot and the tail and rump reddish. (See page 1)

VARIETIES are rare. One milk white is recorded (Zool. 2699), and Mr. Bond has seen two or three pied or white.

Note.—The Redstart has a short sweet song, and is capable of being taught to imitate airs and to imitate other birds.

Flight.—The flight of this bird is rather

quick but short, being rather shy and keeping out of sight as much as possible.

Migration.—The Redstart visits England during the summer, arriving in the southern portion, during the first half of April. It departs again at the end of August, or beginning of September.

Food.—Consists of all kinds of insects, when not too large; it will also eat berries of various kinds.

IN CONFINEMENT it may be fed like other soft-billed birds, and should have plenty of "Ant eggs" (pupæ), and meal worms; if kept in an out door aviary it will be able to procure many insects which it could not indoors.

Habitat.—This bird is generally distributed over England and Wales, though nowhere numerous; it is rare west of Exeter and in Scotland, and in Ireland it is still rarer.

ABROAD it is a summer visitor to most parts of Europe, and is also found in Africa, Asia, the Canary Islands, Maderia, and Teneriffe.

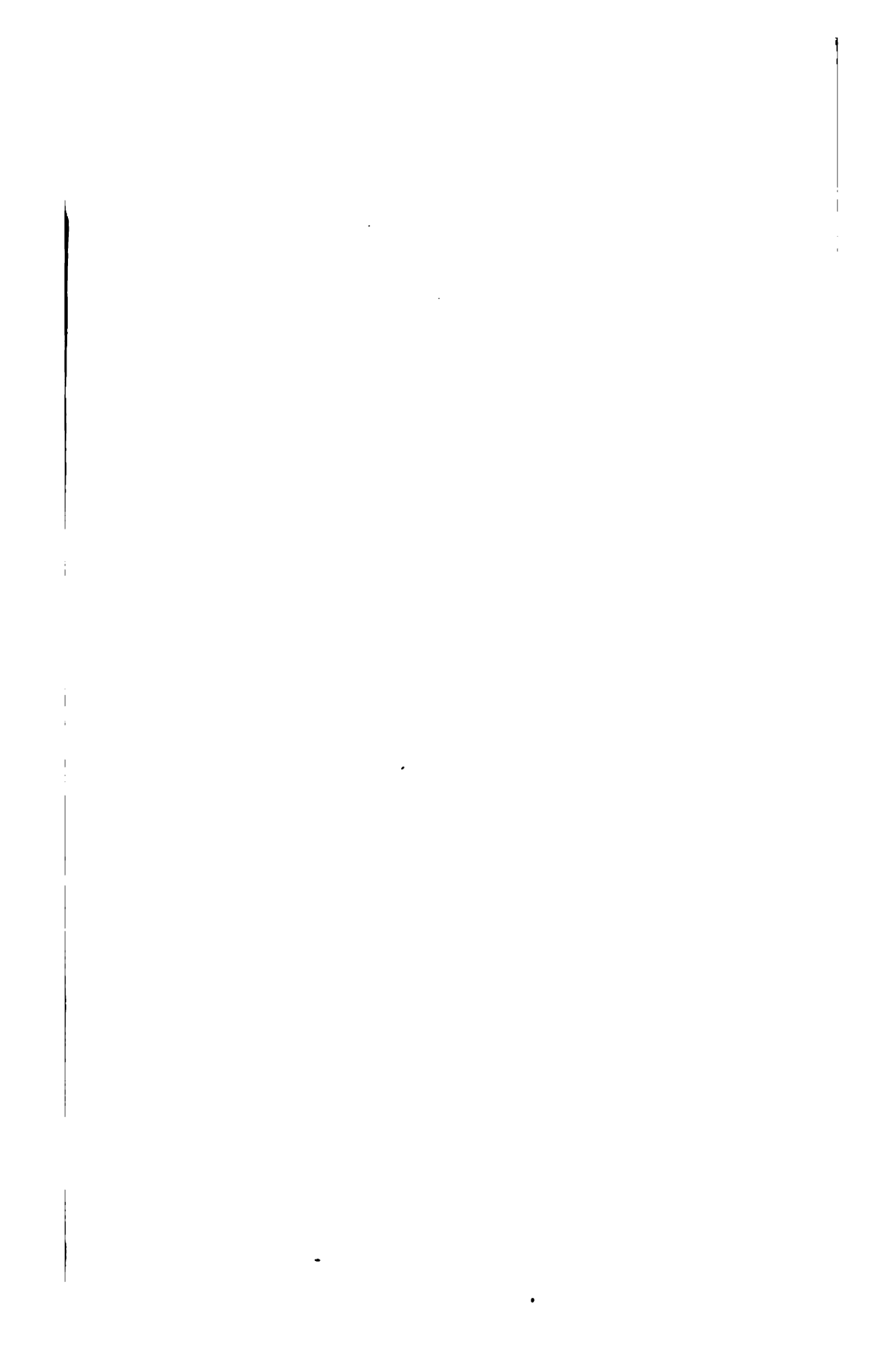
Nest.—Very loosely constructed, and placed in a hole in a wall or old tree, or other similar situation. Sometimes very odd situations are made choice of, such as under an inverted flower-pot. It is constructed of moss, sometimes with a little dry grass, and lined with hair and feathers.

Eggs.—Five or six eggs are laid, and in some rare cases seven; pale bluish-green, rather paler than those of the Hedge-sparrow, smaller and slightly narrower in proportion.

XXXII



REDSTART





BLACK REDSTART

33. BLACK REDSTART.

Sylvia titys, Scop.

TITYS.—A small chirping bird.

Size.—Male, length, 6 in. Expanse, rather more than the Redstart, 9½ in. Female rather smaller.

Plumage.—Male, bill black. Eyes dark brown. Top of head, neck, back, and wing coverts dark bluish grey; rump and tail as in the common Redstart. Primaries brownish black; secondaries white on the outer webs. Chin, throat, and breast black, the feathers margined with grey. Under parts reddish grey. Legs black.

FEMALE.—Similar to the female of the common species, but rather darker, and showing indications of white on the secondaries in old birds.

IMMATURE males are dingy ash blue in colour, no indications of the white line on the wings, as in the adult; tail and rump red, in this plumage they are frequently called "S. Cairii."

VARIETIES seem to be very rare, I do not recollect seeing one recorded anywhere.

Note.—This bird is said to have a song somewhat similar to the common species.

Flight.—Quick and rather undulatory.

Migration — This bird visits this country in the winter, arriving in November, and departing again in March or April, contrary to most of the insectivorous birds; but is believed to be a summer visitor on the Continent.

Food.—Insects of all kinds and small berries.

Habitat. — This bird frequents the southern coast of England, and occasionally occurs inland. It may be met with in certain localities every year, but it is nowhere common. It is also known in Ireland, and one or two specimens have been obtained in Scotland. Mr. F. Bond shot the first recorded British specimen.

ABROAD it is common in Switzerland, Italy, Spain, and other hilly parts of central and southern Europe, but rarely in the northern parts. It is also found in Asia and Africa.

Nest.—The nest is placed in a hole in a rock, wall, or other suitable place, and is formed of moss and grass, lined with hair or feathers. The nest figured is from one given in Yarrell.

Eggs.—From five to seven. White without any spots. I believe it has been known to breed in England.

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BLACK REDSTART.



STONECHAT

34. STONECHAT.

Sylvia rubicola, Linn.

RUBICOLA.—*Rubus* (L.) = the Bramble; *cola* (L.) to frequent.

Size.—Length, 5½ in.; expanse of wings; 9 in.

Plumage.—The adult male in the summer dress has the bill black; eyes dark brown. The whole of the head is black; back and wings brown, each feather darker in the centre. Tertiary wing coverts white; rump white; tail sooty black. On each side of the neck is a white patch. Breast rich chestnut brown, shading off to whitish at the vent; legs black (fig. 1).

In WINTER the plumage is mostly dark brown, only the white portions remaining unchanged. The head is brown, owing to the broad brown margins to the black feathers.

THE FEMALE is without the black head, and the white portions are less conspicuous. Nearly all the feathers are brown, darker in the centre and lighter at the edges. In very old birds the throat and head grow darker and the breast assumes a chestnut tint (fig. 2).

IMMATURE MALES resemble the adult females.

THE YOUNG in the nest plumage are greyish or greenish brown colour, each feather on the upper parts tipped with yellowish white; under parts lighter (fig. 3).

VARIETIES.—The only varieties I have seen of this species are in Mr. Bond's collection; one (fig. 4) killed in Surrey is cream-coloured, and another is cream-colour with white tail and pinions, killed by himself in the Isle of Wight.

Note—The note of this bird is a "chack" or "chat" uttered from the top of a furze bush or hedge. It has also a

song which is sometimes used while on the wing.

Flight.—The flight of this species is short jumping flits from one bush to another.

Migration.—The stonechat arrives in this country about the end of March, and departs again at the end of September, but some remain through the winter.

Food.—Small insects of all kinds and worms. They may sometimes be seen pursuing flies after the manner of the flycatchers from the top of a bush.

Habitat.—In Britain this bird is found in many parts, though somewhat local and never abundant. It is partial to rough, stony places, generally where whin grows. It is common on the top of the cliffs at Flambro' Head and also on the downs at Freshwater, Isle of Wight. It is also known in Ireland and Scotland.

ABROAD it is distributed over all the temperate countries of Europe, also North and South Africa, Asia Minor, and India.

Nest.—The nest is commenced early in the season, generally early in April. It is placed on the ground and under banks, or slightly elevated at the bottom of a whin-bush, and is composed of moss and dry grass, lined with feathers, hair, or fine grass.

Eggs.—Five or six eggs are laid, pale blue, paler than those of the whinchat, generally much spotted with red-brown at the large end.

VARIETIES.—The eggs vary very much in the spotting. Sometimes the large end of the egg is very thickly spotted, the rest of the egg blue; and sometimes the egg is entirely blue, duller than the whinchat's.

XXXIV

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STONECHAT



WHINCHAT

35. WHINCHAT.

Sylvia rubetra.

RUBETRA, red or reddish.

Size.—Length, about 5 in.; expanse, a little over 9 in.

Plumage.—The adult male has the bill black; eyes hazel; whole of the upper part of the head and back light brown, each feather with a black centre; a white streak runs over the eye; ear coverts and wing coverts black; lesser wing coverts partly white, but almost hid by the other feathers; primaries blackish brown with narrow light margins; tail black, all except the centre feathers white for half their length; throat and breast rich reddish buff, edged with white near the darker colours, and shading off paler towards the vent; legs black (fig. 1).

THE FEMALE has the colours less distinct; the ear coverts and wing coverts being brown, the breast less brilliant and without the white edge (fig. 2).

THE YOUNG in the nest plumage are much lighter than the adult female, and much spotted and striped with yellowish white. After the autumn moult they are similar to the adult female.

VARIETIES are rare. Mr. Bond has two in his collection pied with white—one of them is given upon the plate.

Note.—The ordinary note of the Whinchat is a "chat, chat," which assumes a sharper note resembling "u tick, u tick," uttered in a very impatient manner, when the vicinity of the nest is approached. The song is not of great power, but is sweet and agreeable, and generally uttered from the top of a small isolated bush, or upstanding plant among long grass.

Flight.—The flight is from plant to plant, or from one small bush to another, generally selecting the uppermost branch, and uttering its well known note. Occasionally it will hover in a kind of butterfly fashion, as if selecting a suitable place on which to alight.

Migration.—This species arrives in this country from the south towards the end of April, sometimes not until the first or second week in May, and departs again in October. Gilbert White gives the Whinchat among the soft billed birds which remain with us through the winter, but I know of no authentic case; he must have confounded it with the last species.

Food.—Insects of all kinds, especially caterpillars, flies, and others with soft bodies.

IN CONFINEMENT it may be treated like other soft-billed birds.

Habitat.—This bird is common through the summer in all parts of Britain, except the extreme north. It delights in rough places where whin or furze grows, or among mowing grass. From which habit it is, in many parts of Britain known as Haychat, or Grasschat.

ABROAD it is found in many parts of Europe, in parts of Africa, and also I believe in some parts of Asia.

Nest—The nest is placed on or very near the ground, on heaths, waste places, or in grass fields, and is composed of dried grass stems, the coarser on the outside, and finer ones inside, with bits of moss or wool. It is loosely constructed, and rather large for the size of the bird, though artfully concealed and difficult to find. It is begun soon after the birds arrive in this country.

Eggs.—Five or six eggs are laid, bluish-green. In colour they resemble those of the Hedgesparrow, but are generally rather greener, and the surface rather more polished; they are laid about the middle of May.

VARIETIES.—Very rarely the eggs have faint red-brown spots at the larger end.

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WREATER

36. WHEATEAR.

Sylvia Oenanthe, Linn.

ENANTHE. (?)

Size.—Length, nearly 7 in.; expanse from 11 in. to 12 in.

Plumage.—The male in adult summer dress has the bill black. Eyes dark brown. Crown of head and back bluish grey. A broad streak of black extends from the bill over and under the eye, embracing the ear coverts. All the wings feather blackish, with narrow pale margins. Rump and upper tail feathers white, which gives the bird the name of "White-rump," in many parts of the North of England. The tail has the two centre feathers black, the others black at the tips only, and white at the base. Throat and breast buff, shading off to white at the vent. Legs black.

The ADULT FEMALE has the top of the head and back brown, the wing coverts and quills blackish-brown, ear coverts brown; the rest of the plumage similar to the male, but duller in colour. In winter the sexes are more similar.

THE YOUNG, when full grown, differs a good deal from the adult bird. The bill and legs are brown; top of the head and back-hair brown, much spotted with very dull white. Throat and breast light hair brown, with small dark spots and rather mottled. The wings are dull black, the secondary quills broadly margined with reddish brown, primaries tipped with the same. Rump white. Tail like the old female; under parts dirty white.

VARIETIES.—A variety is in Mr. Bond's collection almost white, with the breast, back, ear coverts, tail, and wing feathers tinged with their local colours. A similar one is recorded as having been seen near Norwich (Nat., 1864, vol. i., p. 149). A buff variety is also recorded as having been shot near Worcester, and a white one at Thetford

(Zool., 1496 and 2927). Two or three white ones have also been seen or killed in the neighbourhood of Eastbourne. Mr. J. H. Gurney has one pied, just as if it had been snowed over.

Note.—This bird has a "chat" similar to the last species though seldomer used, except when the vicinity of the nest is approached. It has also a song which is sweet, yet not powerful, and uttered generally from a mound, or the top of a heap of stones, or from a wall.

Flight.—The flight is generally of longer duration than that of the Whinchat, being continued across a field, from wall to wall, or from one elevated place to another, always alighting on a stone or elevated portion of the ground, except when in search of food, when it drops upon the ground from its elevated perch.

Migration.—This species is migratory, arriving in this country at the end of March. For years I knew a certain lane, near Huddersfield, where the Wheatear could be found regularly about the last day of March or the first of April. It departs again at the end of September or early, in October, at which time it assembles, sometimes in large numbers, upon the coast. Gilbert White states that some remain in the south through the winter, but there is probably some mistake, as I know of no other record of its having been seen in the winter in England.

Food.—Insects of all kinds, when not too large, also snails, slugs, worms, &c.

Habitat.—This bird is common in most parts of England, Ireland, and Scotland, frequenting stony moorlands, rough places, and cultivated parts where the fields are divided by stone walls. In Yorkshire it is generally common wherever rough stones or

stone walls are found, generally only one pair frequent the same place, and when they first arrive are very clean and really handsome birds. In this part of the country they are called "White-rumps," the white upper tail-coverts being very conspicuous when the bird takes flight.

ABROAD it has a very wide range, being found all over Europe, in North Africa, Siberia, Northern China, North-Western and Eastern North America, and Greenland. It has also been taken two or three times in Bermuda in the West Indies.

Nest.—The nest is composed of dry grass and moss, lined with wool or hair. It is placed in a dry wall or in a heap of stones. A pair breed in some dry moorland walls every year, and after the young are fully feathered, the old and young come together

to feed in my garden. The manner in which they hop a yard or two, then stand, and then hop another yard or two is very amusing, now and then turning aside to pick up some of my caterpillars, which I have quartered upon a certain plant; and sometimes in such cases, there is a desperate struggle between my love of ornithology and that of entomology, whether to drive the bird away or allow my larvæ to be eaten up.

Eggs.—Five eggs, sometimes six are laid, about the middle of May. They are very pale blue with a slight tint of green, much paler, however, than either the Whinchat, Hedge-sparrow, or Redstart.

VARIETIES are recorded pure white and others more or less spotted with rust red, I have seen many thus marked.—F.B.

XXXVI

NOTES

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GRASSHOPPER WARBLER.

37. GRASSHOPPER WARBLER.

Sylvia locustella, Lath.

LOCUSTELLA.—From its note resembling that of the grasshopper.

Size.—Length, 5½ in.; expanse of wings, 7½ in.

Plumage.—Bill horn colour, darker on the upper edge; eyes brown. The whole of the upper surface is olive brown, each feather on the back having a dark centre. An obscure light streak extends over the eye, and the under parts are lighter. The male has a few obscure spots upon the throat and breast. Legs horn colour.

THE FEMALE is similar, but without the spots on the breast.

THE YOUNG are similar to the female, but duller in colour and more spotted.

VARIETIES.—I have never seen a variety of this bird.

Note.—The note or song of this bird is singularly like the stridulation of the grasshopper insect itself; indeed it is so nearly similar that it is quite possible for a naturalist even to mistake the one for the other. The bird also is capable of prolonging its note to an incredible extent, without pause or intermission. When singing the bird is generally in the centre of some bush, or other place where it is well concealed, very rarely it perches on the top of a bush to sing. It commences soon after its arrival in this country and continues up to the end of July. It also sings during the night, and at Wicken Fen, in Cambridgeshire, I have heard them singing in chorus up to two o'clock in the morning.

Flight.—This bird is very mouse-like in its habits, running among the herbage and bushes, and very seldom taking wing, except when forced to do so, or when performing its migratory flights.

Migration.—A summer visitor to these Islands, arriving in England about the

middle of April, and in Scotland rather later. It returns again to the south at the end of August.

Food—The food consists of all kinds of small insects, small snails, slugs and worms.

Habitat.—The Grasshopper Warbler is found in most parts of England, Scotland, and Ireland, but cannot be called common. In the neighbourhood of Huddersfield it is a regular summer visitor to some of the woods, and is met with in several other Yorkshire localities. At Wicken Fen it is fairly common, but always shy and very difficult to see.

ABROAD it is found in central Europe, rare in Algeria, Tangiers, and Morocco; but the geographical range does not seem to be well known.

Nest—Unfortunately, I have not been able to obtain the nest of this species, to figure in the present edition of this work, although I have used every endeavour, in this neighbourhood and at Wicken, where also my friend, Mr. G. T. Porritt, F.L.S., repeatedly tried to find a nest in June, but without success. It is usually placed at the bottom of a bush or large tuft of grass, and is composed of grass and moss, lined with finer grass. The following interesting account by the Rev. W. Turner, is taken from "The Zoologist," page 941, and shows the true habits of the birds:—"Out of a tuft of grass, overarched by a bramble and containing a small plant of whitethorn, I observed something hop, as it were, and immediately drop into the herbage. I examined the tuft in hopes of finding a nest of something or other; but a careful search resulted in nothing but disappointment. In the course of the day I returned to the spot; there was the same hop and away,

but the motion was so short and quick, that I could not even then distinguish whether I had seen a bird or a mouse. I repeated my search for a nest, but with no better success than before. I then sat down by the spot to watch if anything would approach, and it was not long before I observed the grass move, and a veritable *Sylvia locustella* (threading its way through the grass) approach within arm's length of me; but, after eyeing me for a moment, it commenced a retreat. Feeling confident there must be a nest, I took my knife and carefully cut away the herbage near the tuft, and then proceeded with the tuft itself, in the centre of which, and in a depression of the ground, I found the object of my search; but to the very last there was not the slightest appearance of ingress or egress. I was so struck with what I had witnessed that I again sat down and ever and anon the same stealthy movements to and fro were repeated. The male bird appeared very shy, only once approached, and then not nearer than eight or ten yards; it perched on a twig just above the ground, and for a while kept up a harsh grating noise, but soon disappeared, and I saw it no more. The female uttered no cry. The other two nests I detected in the same manner, in small open places in an extensive wood: their situations were exactly alike, being in the centres of two very large tufts of coarse grass, at a depth of fourteen or fifteen inches (about the same depth as the first nest), from the top. These tufts

were free from thorns or brambles, and being much larger than the first, afforded sufficient concealment, without the nest resting on the ground. There was the same absence of all appearances which could lead you to suppose they contained a nest. In both cases I watched the movements of the female, and they were precisely the same as I have already described; she never rose on the wing; and it would seem probable (if not disturbed) she never flies either to or from her nest, but threads her way through the herbage, and thus effectually prevents everything that could lead to the discovery of her retreat. The whole proceedings most forcibly reminded me of a mouse under similar circumstances. The eggs were six in number. The nests, in the two latter instances, were entirely of dry grass, finer internally; in the first there was a little moss outside, owing probably to a trifling difference in situation."

Eggs.—The number of eggs vary from four to six, and sometimes seven. They are rather round, pale grey, tinged with rose colour, and finely speckled all over with darker rose spots and rarely streaked; sometimes the specks form a darker zone at the large end.

VARIETIES are sometimes found very pale in colour, and with the markings very indistinct. Another variety is recorded in "Hewitson's Oology" with the ground colour pure white.

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GRASSHOPPER WARBLER.



SEDGE WARBLER.

38. SEDGE WARBLER.

Sylvia schanobanus.

SCHANOBANUS.—From two Greek words, meaning being found among rushes.

Size.—Length, about 4½ in.; expanse, 7½ in.

Plumage.—The bill is dark horn colour; eyes brown; the upper parts are olive brown, darker on the crown of the head, and on the centre of each feather on the back; a light streak extends over the eye; the wings, which are short, and the tail are blackish brown, each feather margined with paler colour; under parts greyish white, tinged with yellow brown at the sides and vent; legs brown or nearly black. The sexes are similar in plumage.

THE YOUNG birds are similar to the adults, but duller in colour.

VARIETIES.—A variety is recorded (Zool., 3632), killed in Essex, "of an uniform light canary colour all over, except on the top of the head there were spots or small streaks of pale olive." Mr. Bond has a white one in his collection.

Note.—The song of this noisy bird is loud and varied, and is chattered in a hurried manner. The bird generally selects the centre of some bush as the most suitable place for its concerts, and if a stone be thrown so as not to alarm it too much it will generally sing with renewed vigour. It frequently sings during the night, and is thus often mistaken for the nightingale by persons who have never heard the latter bird, but the songs of the two birds are so different that one cannot be mistaken for the other, by anyone who has heard both.

Flight.—The flight of this bird is quick, generally from one bush to another, or across a stream. If disturbed too rudely, it quits

the bush in which it is singing, flies a short distance to another bush, or a different part of the hedge, and sets up its song again. It is a very lively bird, seldom remaining long in exactly the same place.

Migration.—This is a summer visitor to this country, arriving in England towards the end of April, and departing about the middle of October.

Food.—Small insects of all sorts, and also small worms, slugs, and snails.

Habitat.—The Sedge Warbler is a common bird in all suitable parts of Britain. As its name implies, it delights in the borders of ponds, ditches, and streams where there is a thick growth of bush and weed. In the Fens of the eastern counties of England it is a very common bird.

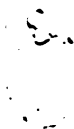
ABROAD it is met with in most parts of Europe, also in Asia Minor, Palestine, as well as Egypt and other parts of Africa.

Nest—I am indebted to Mr. H. Andrews of Aldbrough for obtaining for me a beautiful nest of this species for figuring. It is round and compact, formed principally of fine grass stems, with moss on the outside and thinly lined with horse hair. The site chosen for the nest is generally in a low bush or tuft of grass near the water's edge and never at a very great distance from the ground.

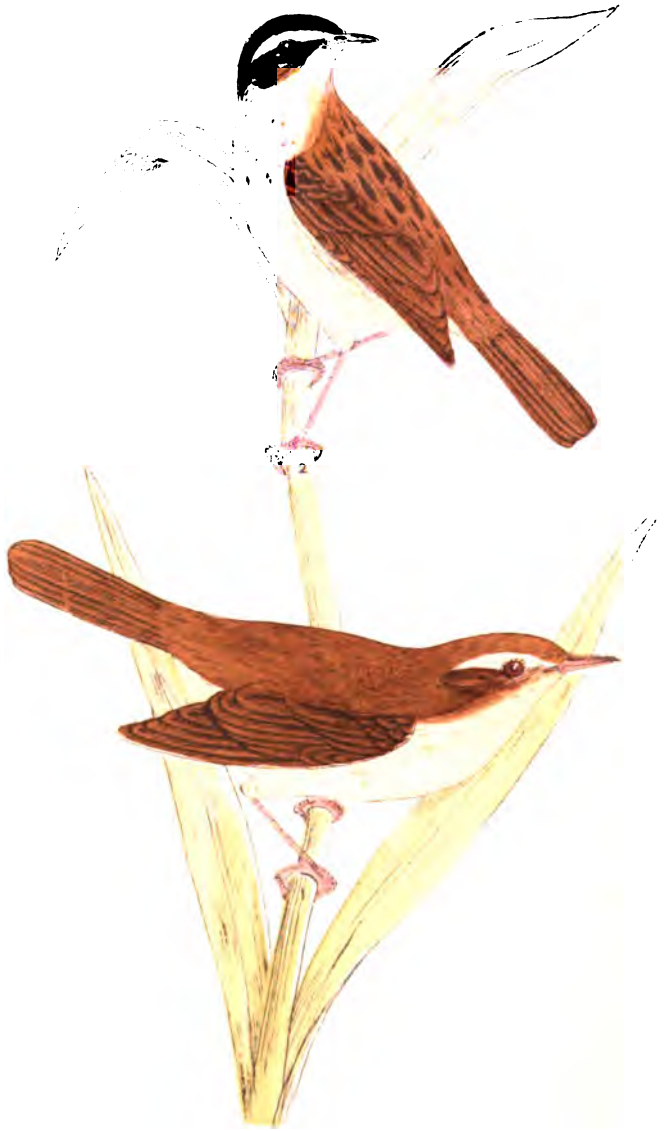
Eggs.—From four to six eggs are laid, which are of a greenish grey or brownish grey, more or less indistinctly speckled over with a darker shade of the same colour. The speckling almost, and sometimes entirely, covers the ground colour. Sometimes there is one or more black streaks about the large end.

VARIETIES.—Mr. A. N. Treadgold has sent me a pale variety of this egg which is almost white. He says this variety is not uncommon in the neighbourhood of Grantham.

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SEDGE WARBLER.



REED WARBLER

39. REED WARBLER.

Sylvia streperus.

STREPERUS, probably from *Streps* (L.) to make a noise, being a very noisy bird.

Size.—Length, $5\frac{1}{2}$ in.; expanse, $8\frac{1}{2}$ to 9 in.

Plumage.—Bill pale horn colour; eyes brown. The whole of the upper parts are light brown, rather darker on the wings and tail. The colour is uniform, thus differing from the last species. A pale streak extends over the eyes. Under parts whiter than in the Sedge Warbler. Legs horn colour. The sexes are similar in plumage.

IMMATURE BIRDS are coloured more like the Sedge Warbler, all the feathers on the back and head having a dark centre. The under parts are much tinged with yellow, and the breast has a few spots of dark colour. I am indebted to Mr. F. Kerry, of Harwich, for having sent me both adult and young birds of this species.

VARIETIES are rare. Mr. Bond has a white one in his collection.

Note.—The song is very variable, much sweeter than that of the Sedge Warbler, often imitating other birds, and like the Sedge bird singing very late in the evening.

Flight.—Similar to the last species; very restless, continually on the move, and often singing at the time.

Migration.—A summer visitor to this country, arriving towards the end of April, and departing at the beginning of September.

Food.—Small insects of all kinds, especially those of aquatic habits, and which are most abundant at the places the bird inhabits.

Habitat.—This is not an uncommon bird in the eastern and south-eastern

counties of England, frequenting stream sides and fenny districts where there is a suitable growth of vegetation. It is also found less commonly in some of the midland counties, and is also reported from Yorkshire, but I am afraid that this and the last species are sometimes confounded. Huddersfield is one of the places where it reported (by Morris) as being common, but he must have been mis-informed, as no specimen has been known to occur there. In Scotland it is rare, and in Ireland very rare.

ABROAD it is found in many parts of Europe, also in Palestine, Arabia, Egypt, and Nubia.

Nest.—I have to thank Mr. F. Kerry for also sending me a liberal supply of the nests and eggs of this species. The nest is perhaps the most beautiful of all the British Warblers. All those sent by my kind correspondent, were built between three or four stems of the common reed, and about half-way up the stems; but I have seen a nest which was affixed to a willow branch, and in this case it was more compact than those suspended in the reed stems. The nests sent me by Mr. Kerry, and which were taken near Harwich, were constructed of blades, stems, and flower-heads of fine grasses; the coarser material being used on the outside, and the finer material inside. One or two of the nests had a few hairs inside, and some had also a little sheep's wool interwoven among the grass. The nest above referred to, which was built upon the stem of a willow, had a much greater quantity of sheep's wool used in its construction than any of those sent by Mr. Kerry, and it was also much more compactly built. Great differences in the neatness of construction were exhibited in the

nests sent from Harwich; probably the best constructed nests were built by the oldest and most experienced birds. The nests are always very deep in proportion to their width; for if they were not so, the eggs or young birds would be rolled out by the first gale of wind; whereas, the nests being built as they are, the reeds may be bent almost into a horizontal position without the contents of the nests taking any harm. Not unfrequently this bird builds in bushes at a

distance from water, and also in osier beds

Eggs.—Four or five eggs are laid. The ground colour is white, or greenish-white, more or less spotted, or rather blotched, with slaty grey, brown, and olive green. They are very variable.

VARIETIES.—One, nearly white, is figured by Hewitson, and there is a similar one in the collection of eggs belonging to the Marlborough College.

XXXIX



REED WARBLER

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KINGBIRD

40. NIGHTINGALE.

Sylvia luscinia, L.

LUSCINIA (Lat.), nightingale.

Size.—Length, about 6½ in.; expanse, about 10½ in.

Plumage.—The bill is brown; eyes hazel. The whole of the upper parts are of a rich reddish brown, the tail much brighter in colour, and very conspicuous when the bird is flying from you. The under parts are dingy white, lighter on the throat, and light greyish brown on the sides and breast; under tail-coverts reddish white; legs and toes brownish.

THE FEMALE resembles the male, but is rather smaller.

THE YOUNG in their first plumage, have the feathers on the back each with a pale buff spot, and those on the breast are margined with dark colour.

VARIETIES.—Mr. Bond has one white and another slightly speckled with white. He has known of another white specimen.

Note.—This is, above all, the song-bird of Britain. On a still night its song can, under favourable circumstances, be heard nearly a mile, and it has a greater variety of notes than any other British bird. It sings by day as well as by night, but the songs of other birds and other noises renders it less striking then.

Flight.—The flight is rather swift, though generally not of long duration, and directed more or less in a straight line.

Migration.—A summer visitor to this country, arriving in the south at the beginning of April, and departing again at the end of August or the beginning of September.

Food.—Small insects of all sorts. They feed very much upon the ground, and are fond of the pupæ of ants, and larvæ of various sorts.

IN CONFINEMENT the Nightingale may be fed upon German paste, "ants' eggs," hard-boiled eggs, with occasional meal worms or caterpillars. A receipt for making German paste for soft-billed birds is as follows:—

| | |
|----------------|-----------|
| Pea-meal | 7 lbs. |
| Scotch Oatmeal | 2 .. |
| Moist Sugar | 1 .. |
| Beef Dripping | 1½ .. |
| Honey | 1 .. |
| Hemp Seed | 2 quarts. |
| Maw Seed | 1 pint. |

The dripping and honey are melted together in a saucepan, and the meal and sugar well rubbed in so that no lumps are left. Then add the hemp seed (crushed) and the maw seed, and put the whole into an earthen jar to cool. A teacupful of this paste must be mixed with a hard-boiled egg and passed through a sieve, which will be sufficient for five or six birds. All the warblers and soft-billed birds may be fed upon this food. These birds, however, should never be kept in confinement except where there is a roomy aviary that can have a little artificial heat in winter. There the birds will be almost as much at home as in the woods, especially if ants, &c., are caught in quantities and turned in.

Habitat.—In this country the Nightingale is nearly confined to the Southern, Eastern, and Midland counties. The most Northern place where it occurs regularly is Odlington Wood, near Doncaster, where, however, it is much rarer than formerly. Occasional stragglers have been known as far north as Scarbro', and I have heard of one near Guisbro', in the heart of the Cleveland Hills. In Scotland and in Ireland it is unknown, and doubtful north of Yorkshire.

ABROAD it is found in most parts of Europe.

except the most northern ; also in Persia, Turkey, Palestine, and parts of Africa.

Nest.—I am indebted to Mr. F. Kerry, of Harwich, for a nest and eggs of this species, which he found so near a fallen tree that the old bird had forsaken it. The outside, as is usual, is composed of grass and dry oak leaves, with a lining of finer grass. It is always built on or near the ground, generally on a sloping bank, or in a hedgerow, where the overhanging herbage hides it somewhat from view.

Eggs.—The number of eggs vary from four to six, and are generally of a uniform dark olive brown (fig. 1).

VARIETIES.—One is figured in Hewitson's "Illustrations," which is bluish grey, with olive red freckles, and which I have taken the liberty to copy (fig 2). Occasionally nearly as blue as the hedge-sparrow's, but somewhat duller in tint.

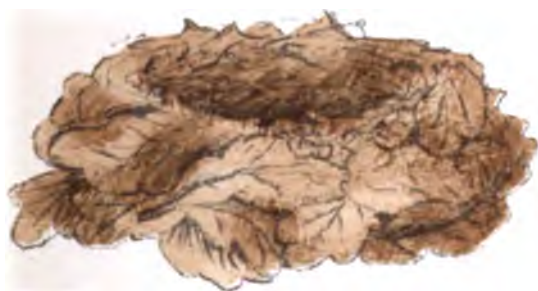
XL



1



2



NIGHTINGALE



BLACKCAP.

41. BLACKCAP.

Sylvia atricapilla, L.

ATRICAPILLA.—Ater (L.), black; capillus (L.), the hair.

Size.—Length, about 6½ in.; expanse, a little over 9 in.

Plumage.—Adult male.—Bill nearly black; eyes dark brown; the upper part of the head black; sides and back of neck ashy grey; back, tail, and wings olive grey; under parts whitish grey; legs lead colour.

THE FEMALE has the back rather tinged with brown, and the crown of the head is reddish brown; otherwise it is similar to the male.

THE YOUNG.—Similar to the female, but rather lighter in colour.

VARIETIES.—I know of none having occurred in this country. In Madeira and the Azores a curious variety of the male is found, the black on the head extending as far as the shoulders and round under the throat. It has been described under the name of *Curruca Heinekeni* by Sir W. Jardine.

Note.—The Blackcap is another rich songster, being inferior only to the last-named species.

Flight.—The flight is seldom of long duration, from bush to bush, or from one clump of briars to another is generally as far as it extends, unless the bird is disturbed, in which case concealment is sought rather than flight.

Migration.—A Summer migrant, arriving here about the beginning or middle of April, and departing again about the middle of September. Occasionally individuals remain through the winter, one in the col-

lection of my late friend Mr. James Varley was killed near Huddersfield, on the 26th of January while feeding upon a manure heap. It was probably a late young bird of the previous year.

Food.—Small insects of all kinds, also berries, such as raspberry, strawberry, currants, ivy &c.

IN CONFINEMENT.—See Nightingale.

Habitat.—It frequents copses, plantations, shrubberies, and similar places, and is a common bird in England and Wales, less frequent in the north, and still rarer in Scotland, but has been found as far north as Orkney. In Ireland it is rare.

ABROAD.—It is met with throughout Europe, except in the extreme north; also in Persia, many parts of Africa, the Cape de Verde Islands, Canary Islands, Madeira, and the Azores.

Nest.—Is usually placed in a low bramble, or among herbage, from one to two feet from the ground. Sometimes it is built in the centre of a fern. It is composed of dried stems of grass, or other plants, lined with fibrous roots, and sometimes with a little moss or hair. It is very loosely put together.

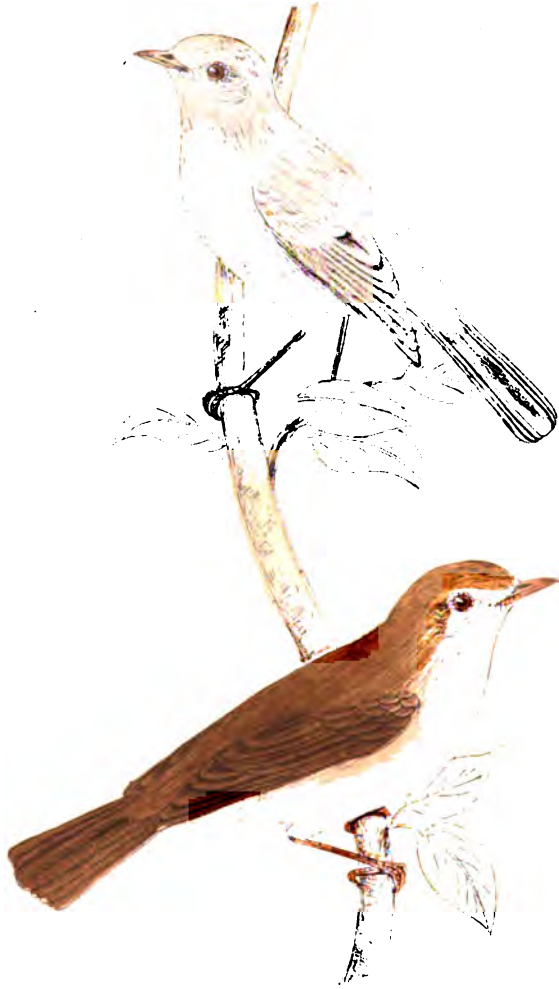
Eggs.—The number of eggs is four or five. The ground is greenish white or stone colour, with yellowish olive blotches and shades, sometimes inclining to ashy, and with a few darker marks.

VARIETIES.—These sometimes occur in which the ground is delicate pink, and the usual markings reddish brown; white varieties are occasionally met with.

XLI



BLACKCAP



GARDEN WARBLER

42. GARDEN WARBLER.

Sylvia hortensis (Gmel.).

HORTENSIS.—Belonging to gardens.

Size.—Length, about 6 in.; expanse, about 9 in.

Plumage.—**MALE.**—Bill dark brown; eyes hazel; the whole of the upper parts ashy brown, slightly inclining to olive green; a faint light streak extends from the bill to above the eye; under parts whitish; legs light brown, tinged with flesh colour.

THE FEMALE resembles the male.

YOUNG.—Similar to the adults, but lighter in colour.

VARIETIES.—Mr. Bond has a dun-coloured bird in his collection which is either this species or the last.

Note.—This too is a good songster, enlivening the copse with its sweet melody. Some even prefer it to the Nightingale.

Flight.—Very similar to that of the Blackcap.

Migration.—A summer visitant, arriving at the end of April, and departing again in September.

Food.—Insects of suitable size, and also berries of various kinds, and small fruits.

IN CONFINEMENT it may be treated as directed under Nightingale.

Habitat.—Found in woods, gardens, and lanes, generally where there is a good undergrowth of brushwood. It is not uncommon in most English counties, rarer in Scotland, and very rare in Ireland and Wales.

ABROAD it is found in most parts of Europe, but only in Summer in the northern parts. Also in Asia Minor, Palestine and parts of Africa.

Nest.—Mr. Geo. F. Wheeldon, of Birmingham, has sent me a nest of this species, from which the figure has been taken. It is built among herbage or low brambles, never at any great distance from the ground. It is composed of dried grass stems very loosely put together, and lined with finer grass roots, wool, or horse-hair. Sometimes the outside is interwoven with cobwebs.

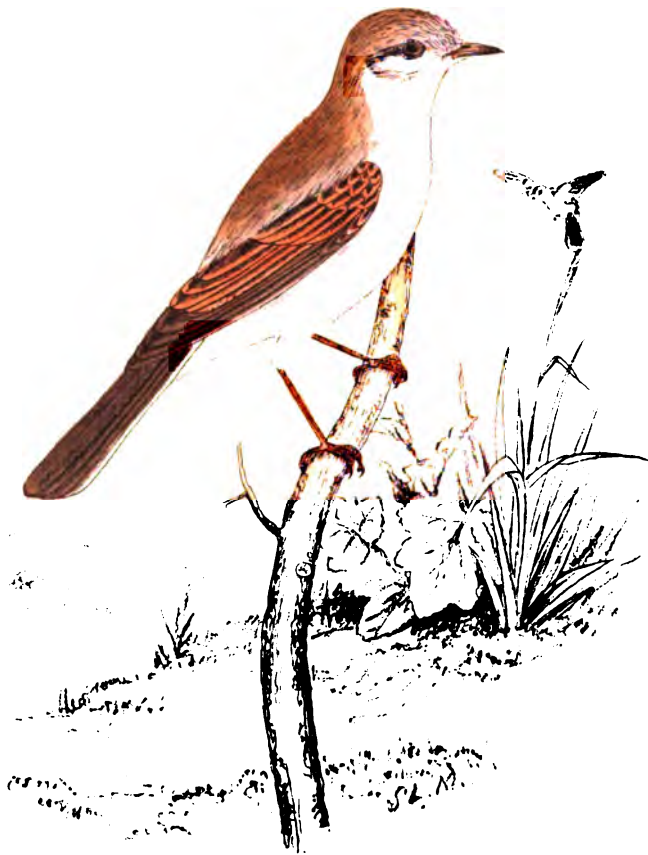
Eggs.—The number is four or five. In size and form they resemble those of the Blackcap, but the ground colour is whiter and more of it shows between the shades. The dark spots are darker and more numerous than in those of the Blackcap, and are always placed *upon* one of the olive shades, which is not always the case with the latter species.

VARIETIES.—White eggs occasionally occur.

XLII



GARDEN WARBLER



WHITETHROAT

43. WHITE THROAT.

Sylvia cinerea, Lath.

CINEREA.—(L.) ash-coloured.

Size.—Length, about 5½ in.; expanse, about 8½ in.

Plumage.—Bill brown, yellowish at the base of the lower mandible; eyes bright hazel; fore and upper part of head bluish grey; back pale brown; greater and lesser wing coverts and secondaries brown, edged with pale reddish buff; primaries darker brown; tail brownish grey, the outer webs of the outer feathers white and rounded at the end; throat white; breast and under parts pale brownish white, tinged with rose pink; legs pale brown.

THE FEMALE is similar, but not so bright in the colours as the male.

THE YOUNG.—Similar but duller in tints.

VARIETIES.—Mr. Bond has three white specimens and one pied in his collection.

Note.—This is a very lively bird and a most incessant songster, though its song consists of but few notes. It begins to sing soon after its arrival in this country. It generally sings from some elevated perch on the top of a bush, but sometimes it hovers over the bush in a jerking manner, singing at the same time.

Flight.—The flight is rather quick and hurried.

Migration.—A summer visitor, arriving in England towards the end of April, and departs by the end of September.

Food.—Small insects of all kinds, and also various sorts of berries, such as elder, currant, rasp, &c.

IN CONFINEMENT these birds are easily kept upon German paste, small worms, meal worms, &c.

Habitat.—This is one of the commonest warblers that visit this country, frequenting copses, plantations, rough pieces, and gardens. It frequents all suitable parts of England, but is rarer in Scotland and Ireland.

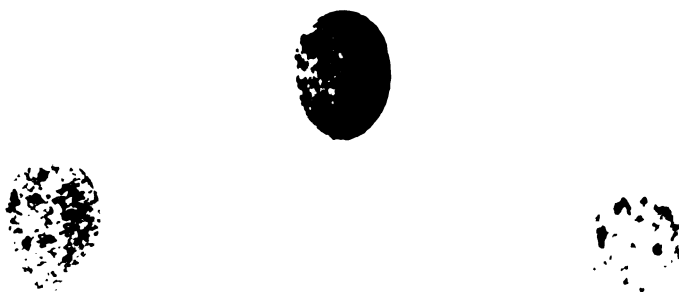
ABROAD it is common in most parts of Europe, found in Persia, abundant in Palestine, and nearly throughout Africa.

Nest.—The nest is constructed of small grass stems loosely put together, and lined with finer grass stems and a little horse hair. It is placed in a low bramble or briar bush or among nettles or other herbage at from one to two feet from the ground. The bird is very impatient when the vicinity of the nest is approached. From the material of which the nest is composed, the bird is called "small strea" (straw) in many parts of Yorkshire.

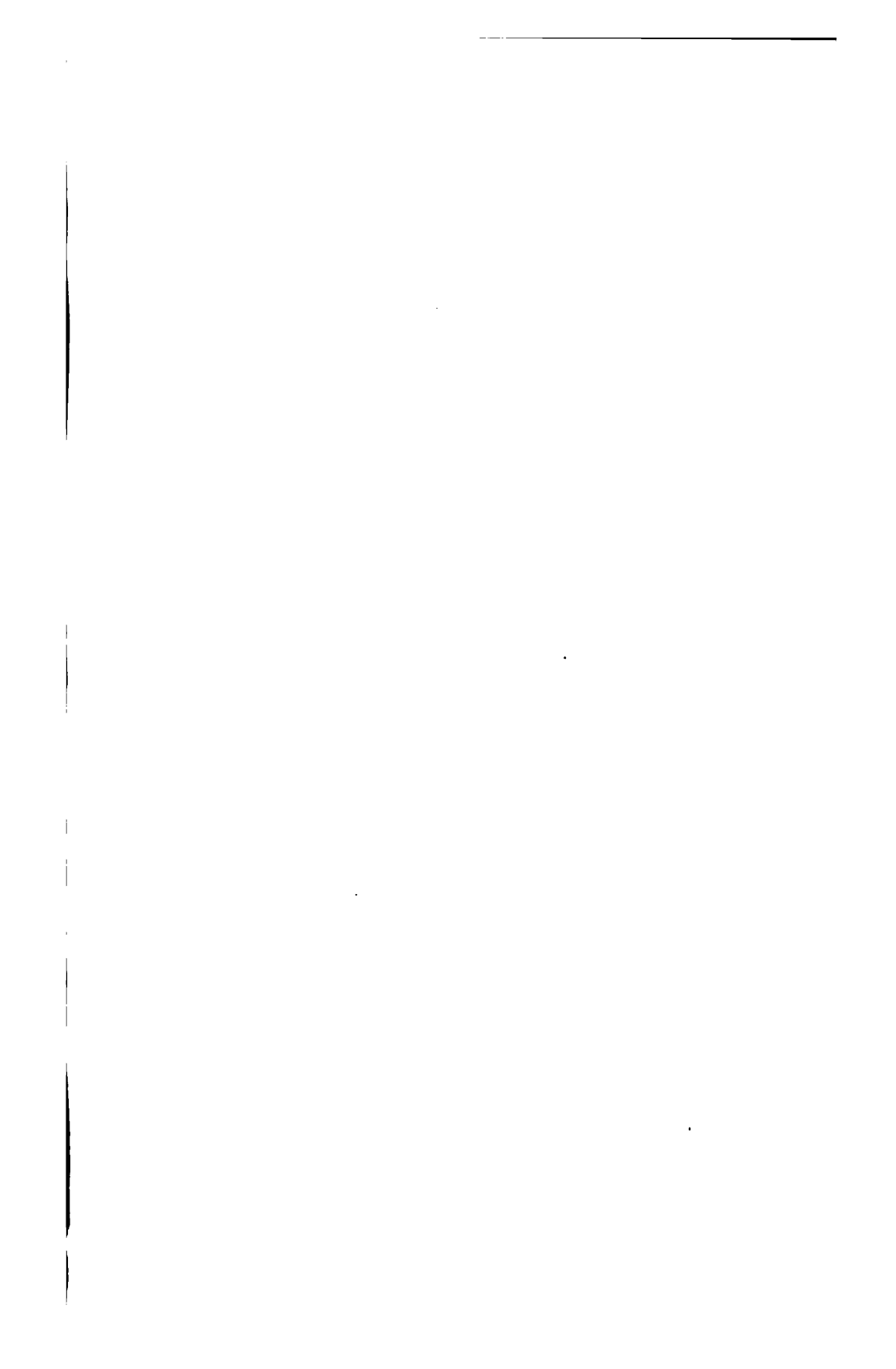
Eggs.—The number of eggs vary from four to six. The ground colour is greenish white, sometimes brownish white, more or less blotched with brownish green and ashy grey. They vary much in tint and extent of markings.

VARIETIES.—The eggs are very variable: the ground colour sometimes white, sometimes buff, and sometimes green.

XLIII



WHITETHROAT





LESSER WHITETHROAT

44. LESSER WHITETHROAT.

Sylvia curruca (L.).

CURRUCA (L.), the Hedge-sparrow.

Size.—Length, about 5 in.; expanse, nearly 8 in.

Plumage.—Bill blackish; eyes, in very old birds, clear pearl grey; forehead and over the eyes ash-coloured; back, wings, and tail grey brown, except the outer tail feathers, which are partly white; throat white; under parts nearly pure white, tinged with reddish rose-colour; legs lead-coloured.

THE FEMALE resembles the male in colour.

THE YOUNG resemble the female, but are somewhat paler in colour and the legs pale hazel.

VARIETIES.—Mr. Bond has one cream-coloured, killed in Essex.

Note.—This bird is very shy and retired in its habits. Its song is seldom very loud, often scarcely audible at twenty yards distance, and embraces little variety.

Flight.—Hurried, and continued for short distances only, in a jerking manner.

Migration.—A summer visitor, arriving about the middle of April and departing again by the end of September.

Food.—Small insects of all kinds, and also berries.

IN CONFINEMENT it may be treated like the others of this genus.

Habitat.—A common bird in the south and eastern counties of England. Rare in Wales and the north of England; still rarer in Scotland; and very rare in Ireland. It frequents places similar to those resorted to by the last species.

ABROAD it is found in most parts of Europe, also in India, China, Palestine, and in many parts of Africa.

Nest.—A nest of this species has been sent me by Mr. Davis of Marlow. It is constructed of fine stems of grass and *Galium* held together by cobwebs, and the inside has a compact lining of horsehair and a few fibrous roots. It is generally placed in a low bush or among herbage.

Eggs.—The number of eggs is generally four or five. The ground colour is white, or very pale greyish white, with distinct spots of olive brown and ashy grey chiefly at the large end.

VARIETIES.—A very pretty variety was sent me with the nest mentioned above and presented to my collection by Mr. Davis.



LESSER WHITETHROAT.



WOOD WARBLER

45. WOOD WARBLER.

Sylvia sylvicola, Penn.

SYLVICOLA (L.), to inhabit woods.

Size.—Length, $5\frac{1}{2}$ in.; expanse, $8\frac{1}{2}$ in.

Plumage.—Bill brown; eyes hazel; the whole of the upper surface is olive green, yellow at the sides of the head and neck; a distinct yellow eye-stripe extends from the base of the bill to the crown; a greenish line runs through the eye; wings and tail brown, each feather edged with bright yellow or greenish; under parts white, tinged with lemon yellow; legs brown.

The sexes do not differ in size or colour.

THE YOUNG.—Similar but duller in colour.

VARIETIES.—Mr. Bond has one lemon-colour, and has seen two white.

Flight.—The flight is generally from tree to tree, rather quick and uneven.

Migration.—A summer visitor to this country, arriving at the end of April or early in May, and departing again in September.

Song.—The song is short, but very pleasant, and continued unceasingly through the summer. It resembles the syllables "tzit, tzit," begun rather slow and ending in a thrill. It is uttered from the lower branches of a tree, and is accompanied by a shivering movement of the wings and tail.

Food.—Small insects.

Habitat.—Purely a wood bird, especially those of older growth, and where the underwood is thick (?). It is found throughout England and Wales, but locally and less frequently in Scotland; in Ireland very rarely.

ABROAD it is found throughout Europe, but only in summer; and found during migration in Greece, Asia Minor, and Palestine; in winter, in parts of Africa.

Nest.—The nest is placed upon a sloping bank in a wood where it is concealed by long grass or other herbage, or among leaves at the base of a stump. It is dome-shaped, having the entrance at the side, and is composed of dried grass stems with a bit of moss or dry leaves. The inside is lined with finer grass or hair, and in this respect differs from that of the Willow Wren. It is difficult to find.

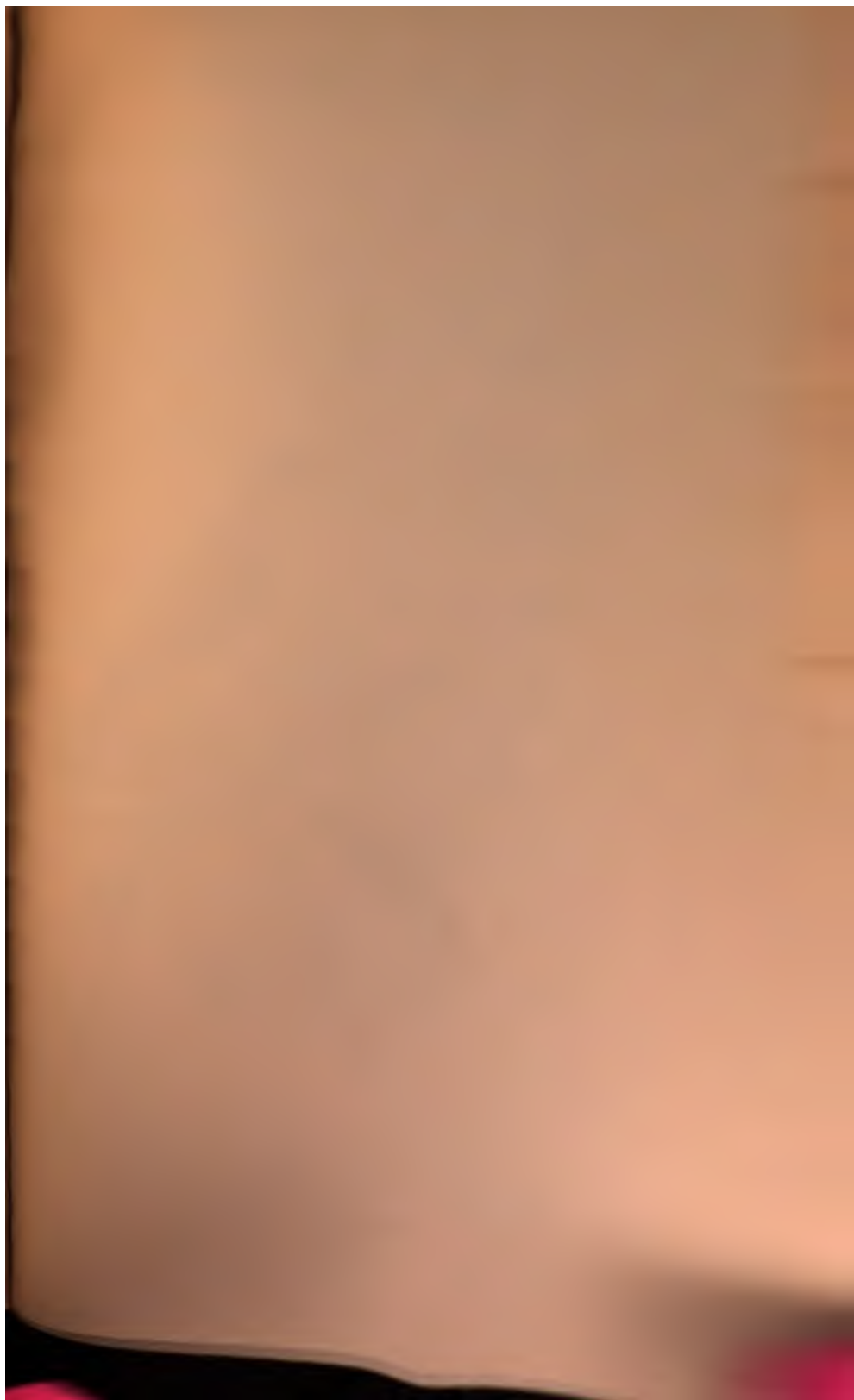
Eggs.—From six to seven eggs are laid. They are white, thickly spotted with purple, red, and ashy grey, the spots being most numerous at the large end, sometimes forming a zone or entirely covering the end with a confluent blotch.

24



WOOD WARBLER







WILLOW WARBLER

46. WILLOW WARBLER.

Sylvia trochilus (Linn.).

TROCHILUS (Grk.), a small insectivorous bird.

Size—Length about 5in.; expanse 7½in.

Plumage.—Bill and legs light or pale brown; eyes hazel; the crown of the head and back down to the tail is olive green; wings and tail a darker shade of the same colour; over the eye is a yellowish white streak, and the sides of the head are white, tinged with yellow; under parts white. This species is rather less than the Wood Warbler, less yellow, and the wings shorter.

The sexes are similar in colour.

IMMATURE BIRDS are much yellower than adults.

VARIETIES.—One is recorded (Nat., 1864, p. 146) "of a uniform pale yellow, inclining to a straw yellow on the upper parts of its plumage; bill and legs straw-yellow; killed in the neighbourhood of Gunton in August, 1861." Mr. Bond has seen several white, more or less tinged with lemon.

Note.—The song, though short and not of much variety, is lively and pleasing. For some time after the arrival of these birds in this country, every wood, copse, and hedgerow rings with their sweet, incessant song. As with most other birds, it ceases during the height of the breeding season, but is renewed again for a short time in autumn before the departure of the birds.

Flight.—The flight is quick, but uneven, and only for short distances, as from one bush to another.

Migration.—A summer migrant, arriving in this country early in April and departing again at the end of September.

Food.—Flies, spider, caterpillars, and small insects of all kinds. The bird may

be observed hopping about the bushes, peering under every leaf, and destroying in this way a great many insects. These birds are very serviceable in checking the too rapid increase of insect life; but it should be remembered that many insects, such as ichneumon flies, are beneficial, and the undue encouragement of insectivorous birds tend to decrease these.

Habitat.—This is one of our commonest summer visitors, being found in woods, plantations, hedgerows, and gardens throughout England, Scotland, and Ireland, though less commonly in the extreme northern portion.

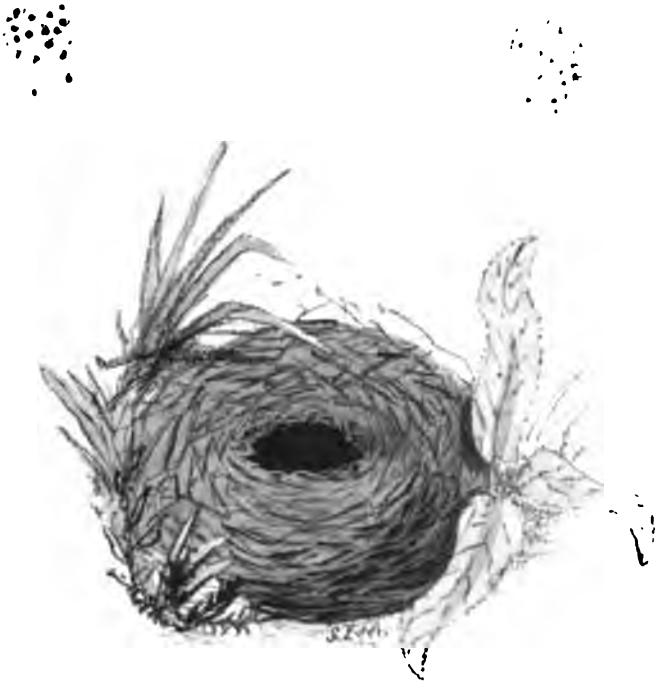
ABROAD, it is common throughout Europe, even as far north as Lapland in summer; also in parts of Asia and Africa.

Nest.—The nest is placed upon the ground, generally on a sloping bank overgrown with herbage, or sometimes in a tuft of herbage on the level ground. It is a large structure for the size of the bird, and is dome-shaped with an opening at the side. The materials of which it is constructed are dry grass and moss profusely lined with feathers. The bird generally sits very close, especially during incubation. The bird will feign lameness in order to draw attention from its nest.

Eggs.—From five to seven eggs are laid, which are white, spotted with red. They vary greatly, however, in the extent and arrangement of the spots. Sometimes the whole egg is covered, especially at the large end, with minute specks; others have a few large, bold spots at the large end and a few smaller ones scattered about. Sometimes odd spots are scattered irregularly all over the egg, while others have them concentrated

into a zone at the large end and the rest of | which the ground colour was pale pink with
the egg almost clear white. | the usual spotting and others pure white

VARIETIES.—Newman says "Sometimes (F. B.).
unspotted white." I have seen some in |



WILLOW WARBLER



CHIFFCHAFF.

46. WILLOW WARBLER.

Sylvia trochilus (Linn.).

TROCHILUS (Grk.), a small insectivorous bird.

Size—Length about 5 in.; expanse 7½ in.

Plumage.—Bill and legs light or pale brown; eyes hazel; the crown of the head and back down to the tail is olive green; wings and tail a darker shade of the same colour; over the eye is a yellowish white streak, and the sides of the head are white, tinged with yellow; under parts white. This species is rather less than the Wood Warbler, less yellow, and the wings shorter.

The sexes are similar in colour.

IMMATURE BIRDS are much yellower than adults.

VARIETIES.—One is recorded (Nat., 1864, p. 146) "of a uniform pale yellow, inclining to a straw yellow on the upper parts of its plumage; bill and legs straw-yellow; killed in the neighbourhood of Gunton in August, 1861." Mr. Bond has seen several white, more or less tinged with lemon.

Note.—The song, though short and not of much variety, is lively and pleasing. For some time after the arrival of these birds in this country, every wood, copse, and hedgerow rings with their sweet, incessant song. As with most other birds, it ceases during the height of the breeding season, but is renewed again for a short time in autumn before the departure of the birds.

Flight.—The flight is quick, but uneven, and only for short distances, as from one bush to another.

Migration.—A summer migrant, arriving in this country early in April and departing again at the end of September.

Food.—Flies, spider, caterpillars, and small insects of all kinds. The bird may

be observed hopping about the bushes, peering under every leaf, and destroying in this way a great many insects. These birds are very serviceable in checking the too rapid increase of insect life; but it should be remembered that many insects, such as ichneumon flies, are beneficial, and the undue encouragement of insectivorous birds tend to decrease these.

Habitat.—This is one of our commonest summer visitors, being found in woods, plantations, hedgerows, and gardens throughout England, Scotland, and Ireland, though less commonly in the extreme northern portion.

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Nest.—The nest is placed upon the ground, generally on a sloping bank overgrown with herbage, or sometimes in a tuft of herbage on the level ground. It is a large structure for the size of the bird, and is dome-shaped with an opening at the side. The materials of which it is constructed are dry grass and moss profusely lined with feathers. The bird generally sits very close, especially during incubation. The bird will feign lameness in order to draw attention from its nest.

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into a zone at the large end and the rest of the egg almost clear white.

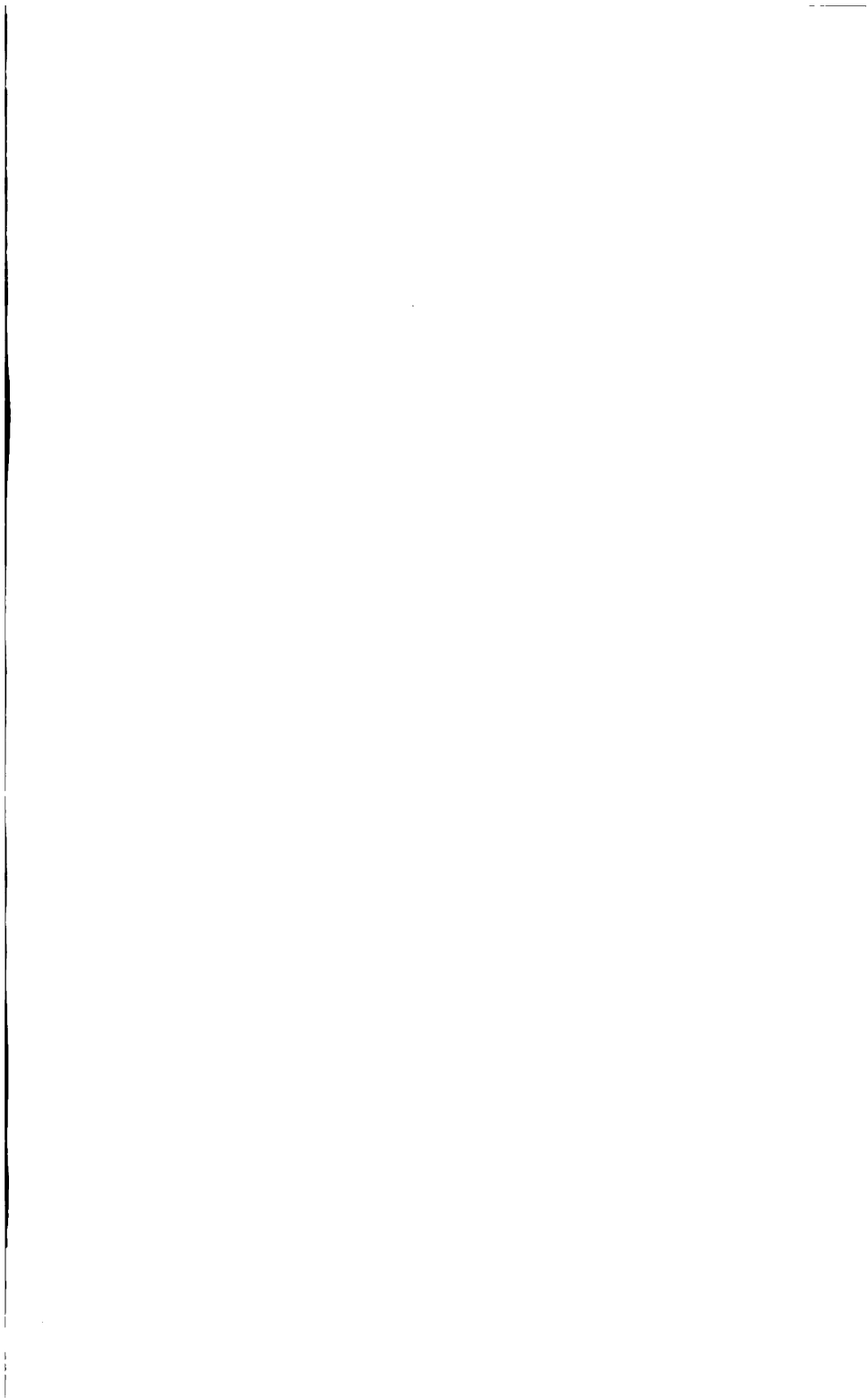
VARIETIES.—Newman says "Sometimes unspotted white." I have seen some in

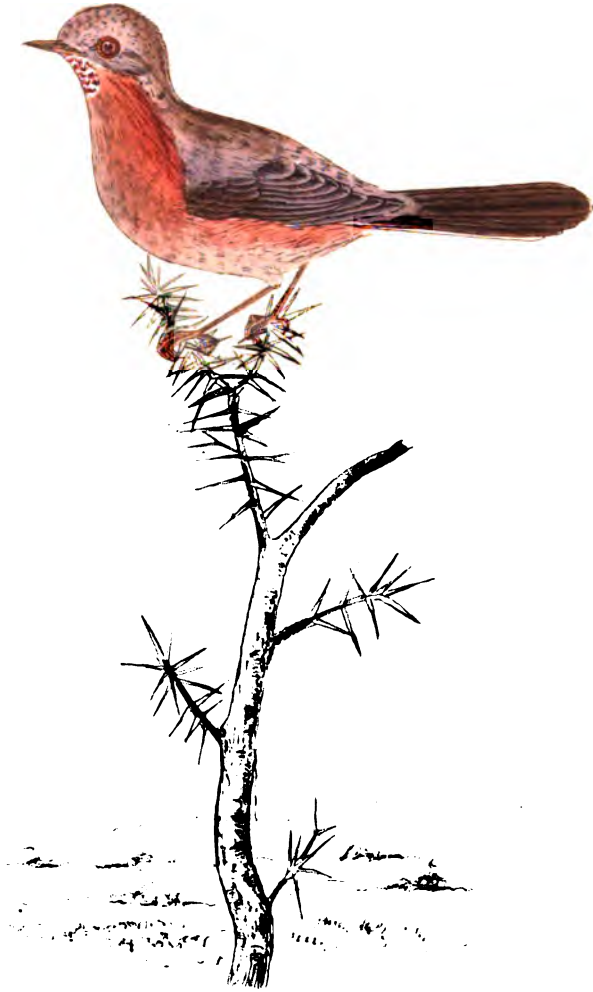
which the ground colour was pale pink with the usual spotting and others pure white (F. B.).

XLVII



CHIFFCHAFF.





DARTFORD WARBLER.

48. DARTFORD WARBLER.

Sylvia provincialis, Timm.

PROVINCIALIS.—of the Provinces.

Size.—Length 5 in.; expanse 8½ in.

Plumage.—Bill blackish; eyes light hazel. Crown, sides of head, neck, and back, dark slaty grey; wings and tail the same, tinged with olive brown, the latter long and graduated, and the outer feathers edged with white. Throat chestnut, with transverse white streaks. The whole of the under parts chestnut red, with a tint of purple, darkest at the sides. Belly white. Legs and feet brown.

THE FEMALE resembles the male, but is not so bright in colour.

THE YOUNG are similar to the female, but duller in colour.

VARIETIES of this species are not recorded.

Note.—The note or song, if it may be so called, of this bird is weak, but lively, of little variety, but continuous. Edward Newman says, (*Letters of Rusticus*). "If you have ever watched a common wren (a Kitty wren we call her), you must have observed that she cocked her tail bolt upright, strained her little beak at right angles, and her throat in the same fashion, to make the most of her fizgig of a song, and kept on jumping and jerking and frisking about, for all the world as though she was worked by steam: well, that's more the character of the Dartford Warbler, or as we call, the Furze-wren." It has also a call note. Like the Sedge Warbler it will often break out into a lively song if a stone be thrown near where it is lurking.

Flight.—The flight is performed by short jerks, and rarely for long distances. For the most part it is confined to the furze bushes, which the bird frequents. Newman

says, "When the leaves are off the trees, and the chill winter winds have driven the summer birds to the olive gardens of Spain, or across the Straits, the Furze-wren is in the height of his enjoyment. I have seen them by dozens skipping about the furze, lighting for a moment upon the very point of the sprigs, and instantly diving out of sight again, singing out their angry impatient ditty, for ever the same." Mr. Bond says they fly a great deal like the Long-tailed Tit, but not so far at once, only just topping the furze bushes.

Migration.—This bird remains in England throughout the year.

Food.—Its food consists of insects. It is said to capture flies upon the wing, and to pursue them from the top of a bush, returning, after the capture, to the same twig, after the manner of Flycatchers.

IN CONFINEMENT they may be fed like other insectivorous birds, with the addition of fruit.

Habitat.—This bird was first noticed in the neighbourhood of Dartford, in Kent, but it has since been found in the furze districts of most of the southern counties of England, although very local. In the neighbourhood of Godalming it was common at the time that the "*Letters of Rusticus*" was written (1849). They inhabit downs and commons where the furze is thick, and are very shy, lively, and difficult to approach. It is not known in Scotland, Wales, or Ireland.

ABROAD.—They occur in many parts of south and central Europe where there is suitable ground. Also in Palestine, Egypt, Algiers, and Morocco.

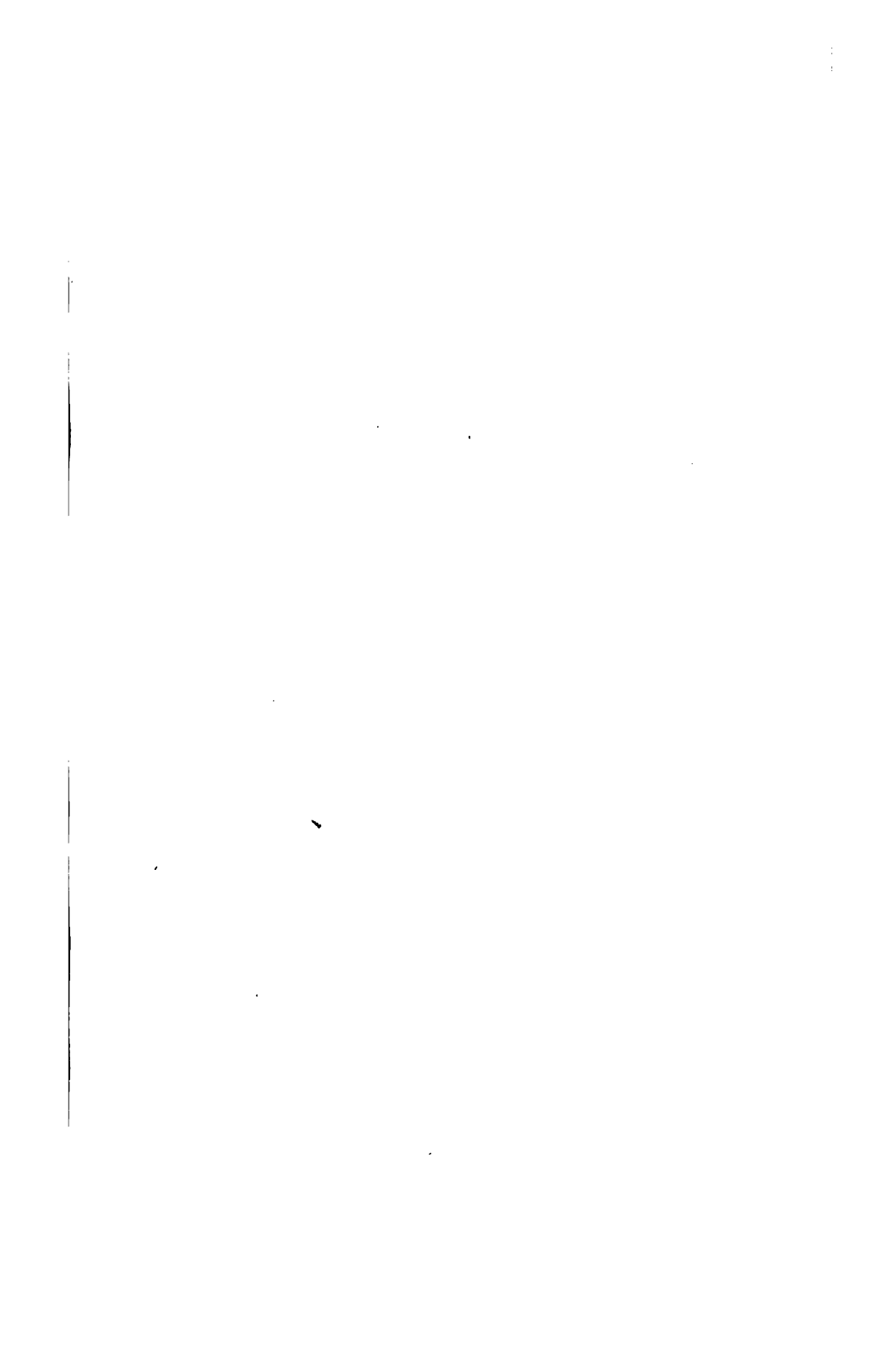
Nest.—The following description is by Col. Montagu:—The nest is composed of dry vegetable stalks, particularly goosegrass, mixed with tender dead branches of furze, not sufficiently hardened to become prickly: these are put together in a very loose manner, and intermixed very sparingly with wool. In one of the nest's was a single Partridge's feather, The lining is equally sparing, for it consists only of a few dry stalks of some species of *carex*, without a single leaf of the plant, and only two or three of the panicles. This thin, flimsy, structure, which the eye pervades in all parts, much resembles the nest of the White Throat." Mr. Bond says that his nests are more compact, and do not resemble that of the White Throat. It is placed in the thick part of a furze bush.

Eggs.—In the same article referred to above, Col. Montagu describes the eggs of the Dartford Warbler as being similar to those of the common White Throat, but rather less, possessing a light tinge of green, and speckled all over with olivaceous-brown and cinereous, on a greenish white ground, the markings often becoming more dense, and forming a zone at the large end. Four is the usual number laid, but sometimes three, and at other times five may be found in one nest.

VARIETIES.—Mr. Bond says "the eggs vary in the colour of the spotting. In some it is of an olive green, and in others reddish brown, and I have seen a few nearly white."



DARTFORD WARBLER.





GOLDEN-CRESTED WREN.

Genus VII. *Regulus*, Ray.

This genus differs from the last in their very diminutive size; in having the feathers of the crown elongated, brightly coloured on the males, and capable of being erected in the form of a crest; in the bill gradually tapering from the base to the tip;

and the nostrils being covered with only one feather. Only one species is native of this country and is the smallest bird we possess. One or two other species have been known to occur as accidental visitors.

49. GOLDEN-CRESTED WREN.

Regulus cristatus, Koch.

CRISTATUS.—A crest.

Size.—Length, 3½ in.; expanse, 6½ in.

Plumage.—Bill nearly black; eyes dark brown; crown of head very bright orange yellow in the centre, the feathers silky, elongated, and capable of being erected; on each side of this is a blackish stripe, and between this and the eye is a paler stripe; back dull yellowish olive; tail brown, rather forked at the end, and each feather edged with yellowish green; primary and secondary wing feathers brown, edged with yellowish green; great and lesser wing coverts brown, tipped with white, forming two white bars across the wing; under parts drab-white; legs blackish horn colour.

THE FEMALE resembles the male, but is generally rather smaller and has the crest lemon-coloured.

THE YOUNG in their nest plumage are without the yellow crest, and the whole plumage is duller in colour than in the adults.

VARIETIES are rare. A white one is in the British Museum which was obtained by K. ntagu. The same author also mentions a pair of a cream colour with yellow crown. Temminck says that sometimes the crown of the head is azure blue, and Morris mentions one with the tips of the wings and tail white.

Note.—The ordinary note is weak and plaintive, at times resembling that of the Marsh Tit.

Flight.—The flight is generally very short, being from one tree to another, very seldom of long duration, and rather jerking.

Migration.—This bird is a resident in this country, or, at least, most of the individuals remain throughout the year; but some leave this country in early spring for the forests of northern Europe, where they remain to breed, and return again in the autumn: so that the bird, though found all the year round, is more numerous in the winter months.

Food.—Their food consists of small insects of all kinds. In the search of food they form into companies, sometimes of considerable extent. These bands are often joined by Long-tailed and other Tits, or sometimes by Creepers. The whole party is generally engaged upon the same tree, running over its branches and peering into every crevice until it is thoroughly explored, and then the little insect-hunters move to the next tree, and will thus take the whole circle of a wood without leaving it. Sometimes they resort to lower-growing plants and feed upon the small seeds. Mr. Bond has noticed them capturing insects on the wing after the manner of the Fly-catchers.

IN CONFINEMENT the Gold Crest is best kept in a conservatory where it can have full range and plenty of insects.

Habitat.—The Gold Crest is met with in fir woods throughout Britain, more numerous in the north than in the south.

ABROAD it is met with in all suitable parts of Europe, and in some parts of south and eastern Asia, and has been noticed in Algeria.

Nest.—The nest is an elegant structure. One of which a figure, almost natural size, is given, was sent me by Miss Prescott Decie, of Bockelton Court, Tenbury. It is

composed of moss and spiders' webs, with a little lichen, compactly woven into an oblong ball, and a thick lining of feathers, with a small opening on one side. It was cut from a yew tree, on which one or two nests are found every year. Generally the nest is placed in a fir, and is suspended on the underside of a branch, or in a fork, but sometimes it is built in a holly or low bush.

Eggs.—The eggs are smaller than those of any other British bird. They vary in number from five to seven, and are of a pale reddish drab, darker at the large end.

VARIETIES sometimes occur white, or white with faint red spots.



GOLDEN-CRESTED WREN

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GREAT TIT

Genus VII. Parus, Linn.

PARUS

The members of this genus are distinguished by the bill being short and thick, each side of the upper mandible terminating in a broad thin cutting edge. Legs and feet moderately stout, and the wings short and rounded. In this country, where we have seven species, they are all of small

size. They are mostly brightly coloured, and abroad attain rich tints of yellow, orange, blue, and black. The Manakins and Cotingas belong to this class. In habits they are very lively, and creep in all kinds of postures over the branches of trees, &c., in search of insects.

50. GREAT TIT.

Parus major, Linn.

MAJOR, greatest.

Size.—Length a little over 6 in.; expanse, 10 in.

Plumage.—Bill black; eyes brown; head black, with a large white spot on each cheek and a small one at the nape; back olive green, shading off to grey on the rump; greater wing coverts bluish black, edged with greenish and tipped with white; lesser wing coverts greenish; primaries blackish, edged with lighter colour, and the three first having white on the inner webs; tail blackish; throat black; under parts yellowish green, with an irregular broad black line down the centre, extending to the vent; under tail-coverts white; legs and toes bluish lead-colour.

The sexes are similar.

YOUNG.—Similar to the adults, but much duller in colour.

VARIETIES.—Mr. Bond has two varieties in his collection: "One with the head, wings, and tail white; the body lemon-colour; the throat dull white; and the beak, legs, and toes dull whitish horn-colour (this is figured on the plate). The other has the crown of the head, the throat, wings, and tail bluish ash-colour; back and under parts dull greenish yellow; bill, legs, and toes lead-colour. The first killed in the New Forest; of the other I have no

record.—F.B." Lewin records one with the mandibles crossed.

Note.—The spring call consists of two notes similar to those of the chiff-chaff, but much louder and more harsh. It has also a coarse chatter; but it has not, nor has any of the Tits, anything which can be called a song.

Flight.—The flight is generally for short distances, performed by repeated fluttering of the wings.

Migration.—Resident in this country throughout the year. In summer-time it is to be met with chiefly in wooded districts; but in winter it draws nearer to the habitations of man, visiting farm-yards, orchards, bird troughs, or even window cills where crumbs are placed for the more sociable of the feathered tribe.

Food.—The chief food of this species consists of insects, for which it hunts in the crevices of bark or under bits of loose bark, which it levers off with its bill, pulling up moss from tree trunks or opening rolled leaves in search. It will also eat seeds as large as peas, and fruit, and has been known to kill young or weakly birds and pick out their brains. Dresser records an instance of one killing a bat and eating its brains only.

IN CONFINEMENT it is said to be lively and interesting, but must not be kept with other smaller birds on account of its carnivorous propensities. It may be fed upon German paste, bread crumbs and seed. It also evinces great delight in picking a bone, with which it should occasionally be supplied, and is very fond of hemp seed.

Habitat.—This species is common in England, Scotland and Ireland. More than a pair are seldom found together.

ABROAD.—It is found throughout Europe, also in Western and Northern Asia, and several parts of Africa.

Nest.—The nest, when any is constructed, is placed in a hole in the bole of a tree, which, if not large enough, the birds enlarge for the purpose; it is composed of moss and feathers, with a little hair; but sometimes the eggs are laid upon the chips of wood which fall to the bottom of the hole when the bird is engaged in enlarging it. Other convenient places having small openings are sometimes made use of, such as wooden pumps, inverted flower pots and such like situations; or at other times it is built in an old nest of the crow or magpie. The nest has also been found in a hole in a bank, and Mr. Porritt obtained four eggs which had been found by some boys, in a nest built upon the ground in Wicken Fen. These were for some time a

puzzle. He sent the boys back for the nest, but unfortunately they could not find it again, but there is little doubt that it belonged to this species. A case is also reported *Science Gossip*, March, 1879¹, of a pair of Great Tits building and rearing their young in a hole in the ground, previously occupied by a colony of wasps.

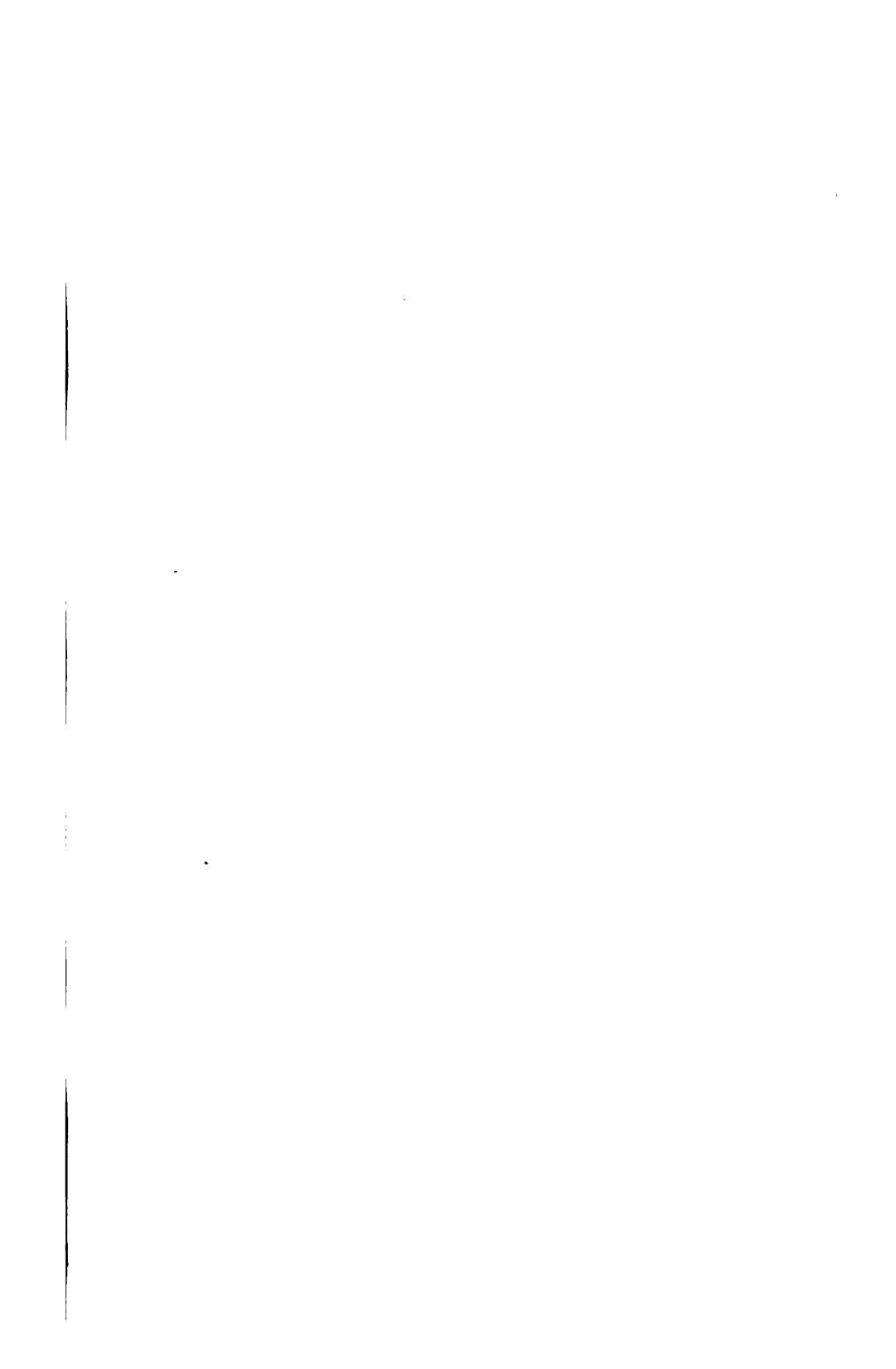
Eggs.—The number of eggs vary from six to eleven in number. They are white spotted with brick red, more especially at the large end. The only eggs they resemble are those of the nuthatch and swallow; but the former though very similar are generally rather rounder, and in the latter the spots are dark purple brown and finer. The situation of the nest of the nuthatch also serves to confuse it with the present species, and collectors of eggs should carefully study the birds as well as the eggs, and in cases like this should make certain of the owners of a nest before any of the eggs are taken. Of course the eggs of some of the other tits are similarly marked, but the size will at once distinguish those of the present species.

VARIETIES.—The eggs of this species only vary in the number or extent of the red spots. The only one approaching anything like a variety was in the nest already referred to, as having been taken on Wicken Fen, and has been lent by Mr. Porritt, for figuring (pl. li. fig. 2). White eggs are occasionally obtained.

L



GREAT TIT.





BLUE TIT

51. BLUE TIT.

Parus caeruleus, Linn.

CÆRULEUS, blue.

Size.—Length 4½ in.; expanse 7½ in.

Plumage.—Bill bluish black; eyes brown. Top of head azure blue, surrounded by a ring of white which runs just over the eyes. A blue-black streak runs through the eye to a patch behind the head, surrounding a large white patch on each cheek and meeting under the chin. Back greenish grey; upper tail coverts freckled with white; tail light blue, the outer web white. Throat bluish black, with a blue stripe running down to the breast. Under parts greenish white. Legs and feet bluish lead-colour. The sexes do not differ except that the female is rather duller in colour.

YOUNG BIRDS are dull in colour, the colours not well diffused. The parts usually white in the mature birds are dull yellow in the young, the stripe down the breast only faint.

VARIETIES.—A white variety occurred in Norfolk in 1848. One is recorded from Oxfordshire in which all the feathers were more or less marked with large brown spots. Mr. Bond has one, of which a figure is given upon the plate:—"The forehead and cheeks white, crown of head and throat pale bluish ash, wings and tail white, slightly tinged with ash; back, breast, and sides lemon colour, belly white, legs and bill light blue. Obtained in Gloucestershire."—F. B.

Note.—The ordinary note of the Blue Tit may be likened to the syllables "tzee, tzee, ttit, tzee," but is varied according to the wishes of the bird for call, or alarm. It has no song.

Flight.—The flight of this species is rather weak, and if continued for long distances becomes undulating.

Migration.—The Blue Tit is a regular resident in this country. During severe weather he leaves the woods and draws nearer to the habitation of man.

Food.—This consists of all kinds of small insects, spiders, grubs, fruits and soft seeds, such as peas. In the search for insects its actions are more like those of a mouse than a bird, running and twisting in all kinds of postures over branches, generally over hedgerows and young trees. Sometimes they resort to low growing plants, and clinging to their slender stems make the tops bend almost to the ground, but the Blue Tit does not quit his hold till every part has been examined. They may frequently be found about gooseberry and other bushes in spring, and may even be seen picking off the buds, but in all probability only those buds which contain insects of some sort. During the breeding season they are particularly ravenous on account of their numerous families, and destroy large quantities of caterpillars. It has been calculated from actual observation that a single pair with a brood of young ones will destroy from six to seven hundred caterpillars in the course of a single day. They are very fond of suet and fat meats, and will always come in severe weather to places where it is usual to feed them.

IN CONFINEMENT it is a pugnacious little bird, though capable of being tamed and becoming very familiar. It has been kept to fly about a room, and even allowed to go out of doors, and it always returned on its own accord. Its food should consist of German paste, crumbs, hard-boiled egg, and a liberal supply of fat meat, especially during cold weather.

Habitat.—This bird is found common-

ly in woods, hedgerows, plantations, and gardens throughout the British Isles.

ABROAD.—Nearly everywhere throughout Europe, and in parts of Asia.

Nest.—The nest is placed in a hole in a wall or tree, and is composed of moss, many feathers, and a little hair. I have had the nest built in a hollow hedge-stake, and Hewitson found one built in the hollow root of an old stump. Many instances are also on record of their having built under inverted flower-pots; in bottles, one of which had the neck only one inch in diameter and fifteen inches deep; and in various other utensils which happened to come in their way. The nest of this bird has also been found inside a solid piece of wood, having been built in a hole and the entrance to the cavity having grown up. The parent birds fight desperately in defence of their home, hissing and biting if the hand be

introduced, or the place in any way invaded. A case is reported (*Science Gossip*, February, 1879), of a pair of Blue Tits lining a Blackbird's nest with soft material and laying seven eggs in it. Two cases are also reported (S.G., March 1879), of the Blue Tit building in old bee hives.

Eggs.—The number of eggs vary from six to ten, but sometimes as many as twelve or fifteen, and even up to eighteen have been found in one nest. Probably when so many are laid in one nest they are by more than one female bird. They are pinkish white, (the pink tint leaving them when blown), spotted, generally most at the large end, and forming a zone, with brick red spots of largish size. They are not unlike some varieties of the Willow Warbler, but are generally rather larger and more dumpy looking.

VARIETIES.—Occasionally white.

NOTE.—Since the above was in type I have had the opportunity of figuring a beautiful variety of the egg (Pl. LI. FIG. 2.) in the possession of Mr. J. Whitaker, F.Z.S. The box represented upon the same plate is, among numerous others, at Rainworth Lodge. The Stump represented upon pl. 54 is also in the garden, close to a foot walk, at the same place, and is generally used by Marsh Tits.

LI



BLUE TIT

1



CRESTED TIT

52. CRESTED TIT.

Parus Cristatus.

CRISTATUS, crested.

Size.—Length, about $4\frac{1}{2}$ in.; expanse, 8 in.

Plumage.—Bill, black; top of head black, each feather edged with white, and elongated behind into a crest, which can be erected at pleasure; sides of head white, with a transverse black patch behind the ear, the white extending beyond the black, and the white again bordered by a black line; back, wings, and tail olive brown; throat black, forming a triangular patch; under parts white, tinted with reddish brown at sides.

THE FEMALE resembles the male, but has not so fine a crest, and the black patch on the throat does not extend so far down.

THE YOUNG are similar to, but much smaller in colour and markings than the adult.

VARIETIES.—I have not seen or heard of any varieties of this species.

Note.—Meyer says the note of the Crested Tit resembles the syllables "ghir-r-kee."

Flight.—The actions of this species are very much like those of the Blue Tit and Cole Tit, so I am told by a person who has seen plenty in Scotland.

Migration.—The Crested Tit remains in Scotland throughout the year.

Food.—The food of this species like that of its congeners, consists of small insects, flies, beetles, larvæ, &c., which it

hunts from the crevices of bark after the manner of the Tit tribe.

Habitat.—This species seems confined to the Northern portion of our Island, being found in the Pine forests of Scotland. It is by no means common, and is never associated in such quantities as we find of the other species. Odd specimens have been reported as having been seen or killed in the North of England, but they mostly rest upon such slender information as not to be reliable. Two or three specimens have been recorded from Ireland by Mr. Blake Knox, in Dresser's work, and two or three others have been recorded from the South of England in Harting's "Hand Book."

ABROAD.—It is found in many countries of Europe.

Nest.—The nest of the Crested Tit is placed in a hole in a tree, said generally to be highish up, and is composed of moss, feathers and other soft material. Sir Wm. Milner had the nest and eggs from the Pine woods of Strathspey, where the Crested Tit was not then uncommon.

Eggs.—The eggs resemble those of the Blue Tit, but rather more mottled at the large end. Mr. Bond says he has Scotch specimens of the eggs in which the spots are larger and brighter than in those of the Blue Tit.

VARIETIES.—Mr. Bond has seen a white egg in a clutch, the remainder being the ordinary colour.

LII



CRESTED TIT



COLE TIT

53. COLE TIT.

Parus ater.

ATRE.—Black.

Size.—Length, $4\frac{1}{2}$ in.; expanse, $7\frac{1}{2}$ in.

Plumage.—Bill black; eyes dark brown; head both above and below black, with a large white patch on each side over the ears, a smaller one behind, and a fine white ring on the eyelid; back brownish slate-colour; tail dark brown; wings brown, greater and lesser wing coverts tipped with white; under parts white, the black on the breast extending to the breast-bone; legs lead-colour.

The sexes are similar in plumage.

~~Young. — The young of the Cole Tit feed on small insects, berries with "ant eggs"~~

nuts, and they will also pick the larvæ from the round oak-galls.

IN CONFINEMENT it is a lively bird in an aviary. It has a very thoughtful habit of hiding its seed when it has more than is needful for present use. A case is reported of one which was kept in a cage. It emptied the seed-box and hid the seed in one corner of the cage and covered it over. Being left without seed for a day or two the tit had to feed from its store, but ate very sparingly, and always covered it over again. It requires great care to keep it healthy in confinement, and should be fed upon nightin-

The following was accidentally omitted from the account of the COLE TIT, printed in the last number.

—o—

The lower figure on plate 53, represents a beautiful variety, which I have only been able to figure since the account of the Cole Tit was printed. It was shot near Southwell, Notts., in 1883, by the Rev. William Beecher of that place, and presented by him to Mr J. Whitaker, F. Z. S., and the specimen is now in his collection.

Food.—The food consists of small insects, larvæ, and berries of various kinds. In search of the former it is ever in motion, peeping, and creeping, and flying from one branch to another, uttering its call-note all the while. It will also eat seed and grain. In the autumn they are very fond of beech

rounder. The following note was sent me by Mr. Mark Pybus of Newcastle "I possess two nests, both taken in the County of Durham, one containing seven eggs and the other ten. These were taken out of holes. The outsides are composed of moss—internally they are thickly and warmly



U

COLE TIT

53. COLE TIT.

Parus ater.

Area.—Black.

Size.—Length, $4\frac{1}{2}$ in.; expanse, $7\frac{1}{2}$ in.

Plumage.—Bill black; eyes dark brown; head both above and below black, with a large white patch on each side over the ears, a smaller one behind, and a fine white ring on the eyelid; back brownish slate-colour; tail dark brown; wings brown, greater and lesser wing coverts tipped with white; under parts white, the black on the breast extending to the breast-bone; legs lead-colour.

The sexes are similar in plumage.

Young.—Like the adult, but duller in colour.

Varieties of this bird seem to be rare. "I have seen two pied specimens" (F.B.).

Note.—The note of this species has been expressed by the syllables "zit, zit." It has also a "tee" or "chee" note. These notes are loudest in the spring, silent during the summer, and used again during the autumn.

Flight.—The flight is generally for very short distances, from one tree or bush to another, and is hurried and performed in a flitting manner. When the flight is of longer duration it becomes undulating.

Migration.—This species is resident in this country throughout the year.

Food.—The food consists of small insects, larvæ, and berries of various kinds. In search of the former it is ever in motion, peeping, and creeping, and flying from one branch to another, uttering its call-note all the while. It will also eat seed and grain. In the autumn they are very fond of beech

nuts, and they will also pick the larvæ from the round oak-galls.

In Confinement it is a lively bird in an aviary. It has a very thoughtful habit of hiding its seed when it has more than is needful for present use. A case is reported of one which was kept in a cage. It emptied the seed-box and hid the seed in one corner of the cage and covered it over. Being left without seed for a day or two the tit had to feed from its store, but ate very sparingly, and always covered it over again. It requires great care to keep it healthy in confinement, and should be fed upon nightingale paste, seeds, berries, with "ant eggs" or other insects. It is also very fond of picking a bone.

Habitat.—This Tit, though not so common as the Blue Tit, is to be met with in all the wooded districts of England and Wales. In Scotland it is much commoner, and is not rare in Ireland. It seems rather partial to old woods, and may be met with in company with other species of Tits.

Abroad.—Seems to be common almost throughout Europe and in parts of Asia.

Nest.—This species generally builds in a hole in a bank, such as those made and deserted by mice or moles. Occasionally it will make its nest in a hole in a tree, and Mr. Bond once found one on a branch of fir close to the bole, like a Long-tailed Tit's, but rounder. The following note has been sent me by Mr. Mark Pybus of Newcastle "I possess two nests, both taken in the County of Durham, one containing seven eggs and the other ten. These were taken out of holes. The outsides are composed of moss, internally they are thickly and warmly lined

with fur. One of the nests being composed of very clean material, it forms an exceedingly pretty back ground for the clutch of eggs." But little can be said as to the construction of the nest of the Cole Tit, for being more of a lining for the cavity into which it is deposited, it is naturally dependant upon that for its shape and size.

Eggs.—The number of eggs vary from

six to nine, and are white spotted with red-brown. Mr. Hancock in his "Birds of Northumberland and Durham" records a nest which was taken containing twenty-one eggs, but adds that no doubt these were the produce of more than one female bird.

VARIETIES.—Occasionally pure white ones occur.

LIII



COLE TIT

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MARSH TIT

54. MARSH TIT

Parus palustris, Linn.

PALUSTRIS.—*Palus* (Lat.), a marsh.

Size.—Length, 4½ in.; expanse, about 6 in.

Plumage.—Bill black; eyes dark brown. The whole of the upper part of the head, as far as the eyes on the sides, and to the neck behind, black. Back olive green; wings and tail a little darker, and the latter square at the end. Throat black, mixed with grey-tipped feathers. Cheeks, breast, and under parts greyish white, tinged with brown at sides and towards the vent. Legs lead-colour.

THE FEMALE is similar to the male, but has the colour duller.

THE YOUNG are like the females.

VARIETIES.—Mr. Bond has a variety which he aptly describes as having the appearance of having been in a flour-bag, all the colours being obscure and pale. This was killed near Brighton in 1875. Another in the same gentleman's collection has the crown of the head black; throat black, with a few white feathers; shoulders, tips of primaries and tail dark brownish black; the rest of the plumage pure white, with the back of the neck tinged with very pale hair-brown.

Note.—The note of the Marsh Tit is like the syllables chee, tee, or zee, somewhat resembling the squeaking of a mouse; it has also sharper and crisper call notes. The note is generally the first indication we have when we are near the presence of these birds, and they may often be seen creeping along the branches uttering their feeble cry.

Flight.—The flight is very similar to that of its congeners, being rather quick and undulating.

Migration.—They do not leave this country, but remain in their favourite haunts throughout the year.

Food.—Their food consists of small insects and their larvæ, spiders, small seeds and bits of meat. The insects are sought in the ordinary way, by peering over the branches and into the crevices of the bark. They seem to be very fond of the grub in the round oak-gall. The following interesting account is given (Sci. Goss., 1875, p. 92): "In the course of a ramble through the fields during the very severe weather which distinguished the closing week of 1874, my attention was arrested by noticing a little bird seated on the topmost twig of a pollard willow at the opposite side of a field from where I was passing, and did not apparently move from its place. I accordingly crossed to the foot of the tree, and was rewarded by a sight which I never shall forget. Perched as I have described was a female of the Marsh Tit busily engrossed in a search for her dinner. Mrs. Tit was vigorously digging into the substance of the twig upon which she was perched, tearing off the bark in shreds, which she kept tossing away with quick impatient gestures. For some time I stood spell-bound in admiration of her dexterity. Clinging to a twig not thicker than a lady's finger, sometimes in an upright position, but more frequently back downwards, she kept her bill in perpetual action upon the twig. . . . At last the Tit, startled by the discharge of a fowling-piece in another field, flew off in alarm. I then managed to secure the twig which had been the object of the bird's operations. It presented a curious appearance. The outer bark was much of it torn off, and the inner and tougher rind hung in jags in a very irregu-

lar fashion, much reminding one of a branch that had been gnawed by some playful puppy. A pocket magnifying-glass revealed to us that the bark was punctured at irregular distances with small holes beautifully drilled. On removing the bark in the neighbourhood of each drill that had been undisturbed by our predecessor in the work, we found a jolly little grub, tinted like healthy salmon ova. The grubs were discovered just beneath the inner bark and uniformly in an upward direction from the drilled holes." This observation proves very conclusively that the supposed destruction of the buds of fruit-trees by Tits is really an act of very great benefit. I am of opinion that a Tit never destroys a bud unless it presents some indications of the presence of insects.

IN CONFINEMENT they seem to do very well. I am informed there are generally some in the cages in the Zoological gardens.

Habitat.—This species may be met with in low, wooded districts, by the margins of rivers and streams, and is common in almost all such situations throughout England and Wales; but partial in its distribution in Scotland, rarer in the extreme north and in Ireland. In winter they generally associate in small companies, either by themselves, sometimes along with other Tits.

ABROAD it is found almost throughout Europe and parts of Asia Minor and China.

Nest.—The nest is composed of moss, and down either from rabbits or the catkins

of willow. It is placed either in a hole in a bank or in a hole in a tree or stake; when the hole is not large enough the birds excavate it either in depth or width, carrying the chips sometimes to a considerable distance. Mr. Mark Pybus writes me as follows:—"The nest I possess of the Marsh Tit is in a hedge stake about four inches in diameter. It has been hollowed out with great labour, for the wood is far from being in the worst stages of decay. The hole is made in the side of the stake about four inches from the top and goes down quite a foot. At one side the wood is almost an inch thick; at the other, very little beyond the bark is left. The bottom of the hole contains the nest, made of thistle down mixed with a little fine grass. It was taken on the 13th of May at Prudhoe-on-Tyne.

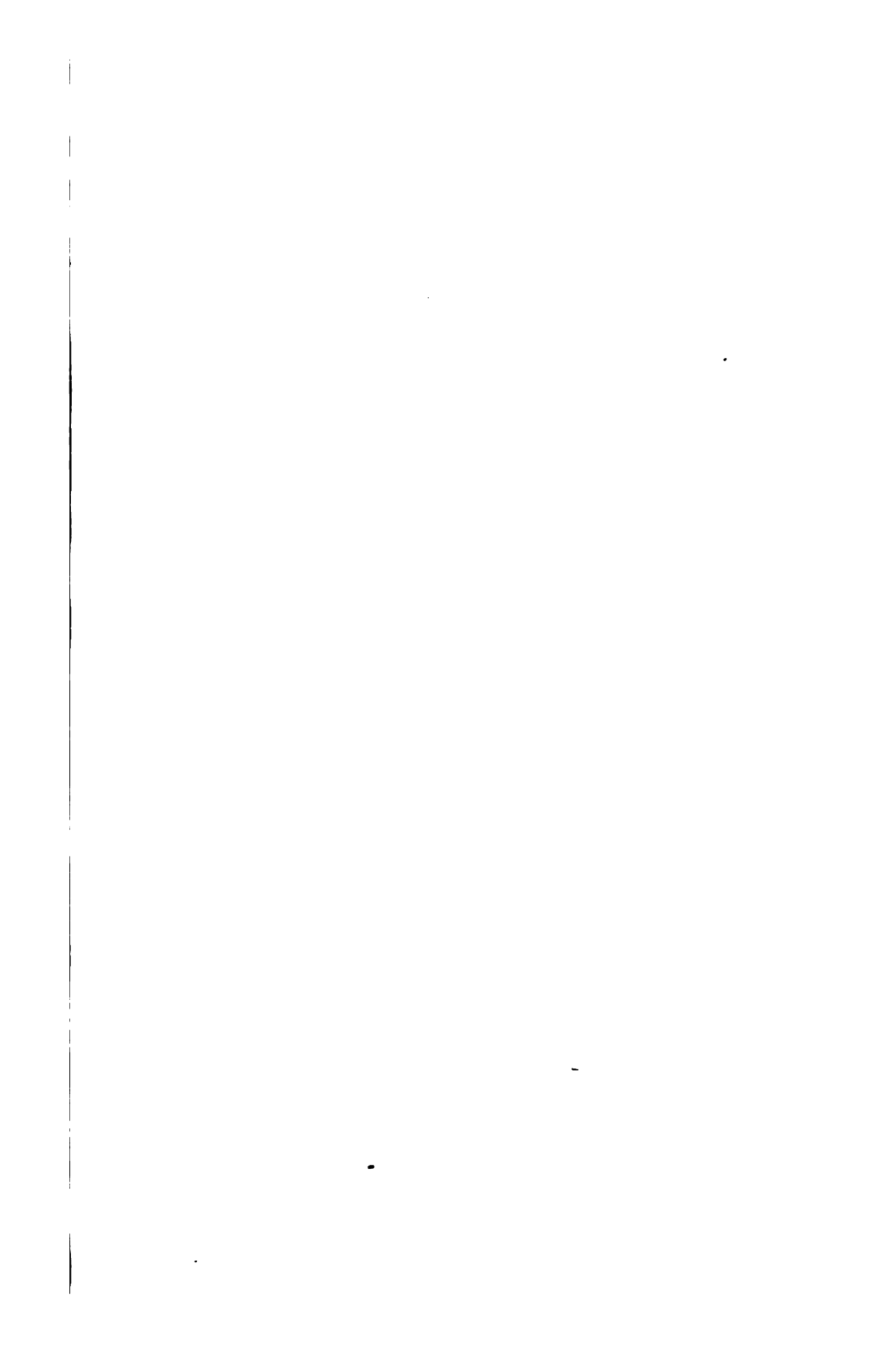
I have inserted upon the plate a figure of one of the numerous boxes provided for the Tits by Mr. J. Whitaker, F.L.S., at Rainworth Lodge. These boxes have movable tops, so that the eggs or young birds can at any time be inspected. The one figured is tied against the bole of a fir about four feet from the ground, and is occupied every year by a pair of Marsh Tits.

Eggs.—The nest referred to above contained eight fresh eggs, and the hen bird was dead upon them when found. The usual number is from six to eight. They are white, with fine red spots, principally at the large end.

VARIETIES occasionally occur pure white without any spots.



MARSH TIT





LONG-TAILED TIT

55. LONG-TAILED TIT.

Parus caudatus. Linn.

Y BENLOYN GNYFFONHIR (Anct. Brit.)

CAUDATUS—the tail; *Cauda* (Lat.)=tail. This name was given by Linnæus to the white-headed Scandinavian form of this bird; Sharp and Dresser have described our bird as distinct under the specific name of *Rosa* (Blyth).

Size.—Length 5½ in. to over 6 in.; expanse about 6½ in.

Plumage.—Male, bill black; eyes brown. Forehead and crown greyish white, a black line running just over the eye. Cheeks greyish white. Back of head and back black, the feathers having broad rosy pink edges near the wings and on the lower part. Wings dark brown, nearly black, the secondaries margined with grey. Tail very long and rounded at the end; black, except the three outer feathers which are white on the outer web and at the tip, the outer feathers having the most white. Throat and under parts white, shading off to rosy at the vent. Legs black. The whole plumage is very soft and downy.

THE FEMALE resembles the male.

YOUNG BIRDS are less bright in colour, the back more brown, and the light parts about the head marked with brown.

VARIETIES.—The form found in the north of Europe, the true *P. caudatus* of Linnæus, and ours are probably only geographical races of the same species. It differs from ours in having the head entirely white without the dark line over the eye. The back and secondaries are also rather lighter. A specimen of this form was picked up dead at Tynemouth, in November, 1852, and presented to Mr. Hancock's collection (Birds Northumberland and Durham), and another is in the Newcastle Museum. This form is

figured upon the plate (fig. 2.) The only variety I am acquainted with of this species is in the rich collection belonging to Mr. J. Whitaker, F.Z.S., of Rainworth Lodge, Notts. This specimen is a dun colour, or pale grey, nearly white on the wings and tail, and a few markings of the normal colour on the secondaries. It was killed near Horsham, in Sussex (fig. 3.)

Note.—The note of this species is very feeble, resembling the syllables "tzee, tee, tee," "zee, tee," or "chee." It is rather a noisy bird, or at least a flock of them seem to do their best to make themselves heard, both when searching for insects and when on the wing.

Flight.—These birds work in companies, and as they skirt a wood and fly from tree to tree their small size and long tail give them a somewhat peculiar appearance. Their flight is rather undulating and never of long duration, chiefly from one tree to the next.

Migration.—This species is resident in this country throughout the year. In winter they associate in small companies, probably one or more families, old and young, but they separate again before breeding time. These companies are always accompanied by Creepers, other Tits, or Crested Wrens.

Food.—Small insects of all kinds form their staple food.

IN CONFINEMENT.—I am not aware that this species has been kept in captivity.

Habitat.—This is a common species in most wooded districts, especially along hedge-row timber and fir plantations.

throughout England and Wales; common also in Scotland, except the most northern parts. It is also to be met with in Ireland, but in decreased numbers.

ABROAD it is met with nearly throughout Europe and parts of Asia.

Nest.—The nest of the Long-tailed Tit is one of the most beautiful and complete pieces of bird architecture. The nest which is figured upon the plate was sent to me by Mr. F. Kerry, of Harwich. It is a semi-circular dome, composed of moss, wool, and cobwebs, or spiders' nests, completely and evenly studded all over the outside with bits of grey lichen stuck upon the cobwebs. The inside is profusely lined with feathers, and a round hole on one side near the top for entrance and egress. The nest generally rests vertically, with its base fixed to an horizontal branch of a tree; but sometimes

it is built in lower bushes—in fact, the nest figured was cut from a bramble-bush. The nest is very large for the size of the bird, the one figured being $5\frac{1}{2}$ in. high and $3\frac{1}{2}$ in. wide. Mr. John Hancock records one in his collection which has a valvular flap or lid, which falls over and completely closes the entrance, and which must have been raised every time the bird passed in or out. The nest is commenced by the end of March.

Eggs.—The number of eggs laid vary from seven to nine, sometimes even more. Before they are blown the yolk gives to the shell a delicate pink tint; but after they are emptied of their contents the shell becomes white, and then some faint red spots are perceptible round the large end.

VARIETIES.—Sometimes white, without spots.



LONG-TAILED TIT

THE "ECONOMIC NATURALIST" SERIES OF
ILLUSTRATED HAND-BOOKS ON BRITISH NATURAL HISTORY.

**A HISTORY
OF
BRITISH BIRDS, THEIR
NESTS, AND EGGS.**

**WITH HAND-COLOURED FIGURES OF
ALL THE SPECIES AND VARIETIES,**

By S. L. MOSLEY,

**WITH TEXT REVISED
BY A FELLOW OF THE ZOOLOGICAL SOCIETY.**

**VOL. II.
INDIGENOUS LAND BIRDS.**

**HUDDERSFIELD :
S. L. MOSLEY, BEAUMONT PARK MUSEUM.**

1887.

PREFACE TO VOLUME II.

—:O:—

It is exactly three years since the first Volume of this Work was completed. I then hoped to have the second Volume ready for the binder long ere this, but circumstances have combined to prevent that hope being fulfilled. The work I have done during the past two years for the Government Museums, in fitting up Collections of Agricultural Insects, has been very heavy, and without great sacrifices in other respects could not have been completed in the time; the work, however, is of such great national importance that I felt perfectly justified in undertaking it, especially as it was offered to me on the recommendation of Miss Ormerod.

My thanks are due to Mrs. Bittersby, Messrs. J. Whitaker, F.Z.S., G. T. Porritt, F.L.S., J. H. Gurney, F.L.S., and Wm. Middlemost, for their great kindness in sending me sketches of their specimens, or entrusting them to a journey through the post for the purpose of being figured in this volume; and also to the first named gentleman, as well as to Messrs. F. Bond, F.Z.S., C. S. Gregson, and Others, for having allowed me the fullest facilities for visiting their collections and taking sketches therefrom.

The present volume concludes the Land Birds: Vol. III will be Indigenous Waders; Vol. IV Indigenous Water Birds; and Vol. V Accidental Visitors. For the next volume I have sketches of many extremely beautiful and interesting Varieties of Wading Birds never before published, and Mr. Bidwell having most obligingly given me permission to figure from his extensive collection of Downy Young I shall be able to make the plates of these birds very complete.

S. L. MOSLEY.

Beaumont Park, July 1887.

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BEARDED TIT.

56. BEARDED TIT

Parus biarmicus, Linn.

BIARMICUS.

Size.—Male, length, 6 in.; expanse, about $7\frac{1}{2}$ in. Female, length, $5\frac{1}{2}$ in.; expanse, $7\frac{1}{2}$ in.

Plumage.—**MALE**, bill and eyes yellow; eyelids bright orange, tinged with red in the breeding season; front, upper part and sides of head grey, shading off to fawn-colour behind the head and upon the back; wings darker; primaries tipped with white, which seem to form four white lines down the back when the wings are closed; the outer edge of the tertials is also white; behind the bill and eye it is black, which extends downwards, the feathers being elongated and forming a black beard on each side of the throat; throat and breast white, shading off to pale fawn at the sides; under tail coverts black; tail fawn-colour, the three outer feathers white at the tips, the centre feathers much longer than the side ones; legs black.

THE FEMALE is smaller than the male; the grey on the head is wanting; the fawn-colour is not so bright; and the beard is not so large, and is white; and the under tail coverts pale. tawny, orange or fawn-colour.

THE YOUNG has the beard indicated by a black streak from the bill to the eye in the male, it has also a large black patch on the back. The outer tail feathers are white; the three next black, broadly tipped with white; all the rest of the plumage similar to the adult female.

VARIETIES.—Mr. Bond heard of a white one some years ago on Whittlesea mere.

Note.—The note is said to be clear and musical, "and may be compared to the music of very small cymbals;" is clear and ringing, though soft, and corresponds well

with the delicacy and beauty of the form and colour of the bird.

Flight.—"Their flight was short and low, very undulating, only sufficient to clear the reeds."

Migration.—They remain in their favourite haunts in this country throughout the year.

Food.—The seeds of the reed and small molluscs form a large proportion of the food of this species, but small insects, larvæ, &c., are also appropriated.

IN CONFINEMENT they are said to be very docile and easily tamed. A writer in *Science Gossip* (April, 1870) says:—"I have kept several pairs of these birds in cages (in Holland), where they appeared to be very happy as long as they were kept together; but as soon as one of them died, the other began to pine, and never survived its mate more than a week or fortnight. It is very amusing to watch these birds at night, as the male always covers the female with his wings when asleep."

Habitat.—The Bearded Tit used to be found in most of the fenny districts of Cambridge, Huntingdon, Suffolk, Norfolk, and Lincolnshire, and no doubt, is still to be met with occasionally in some of these places. But it is very doubtful if it is now to be met with regularly anywhere in this country except in the Norfolk "Broads," especially those of Hickling and Horsey. Wicken Fen seems to be a likely place for it, but I have sought for it there in vain, and Mr. Bond who has known the fen for nearly fifty years, never saw it or heard of being there. It frequents margins of fresh-water ponds and fen dykes where reeds grow abundantly, and is seen to be very

lively, running up and down the reed stems with great agility, not often taking to the wing on being disturbed, but running quickly down the reed stem into the thick cover. Morris, on the authority of the late Mr. Wm. Eddison, states that it is not uncommon near Huddersfield, but this is a mistake, I am not aware that it has ever occurred there.

ABROAD.—It is found in almost every suitable European country, especially Holland; also in France, Switzerland and Turkey, rare in the latter country; it has also been met with in Asia Minor.

Nest.—Mr Hoy describes the nest as being "composed on the outside with the dead leaves of reeds and sedges, intermixed with a few pieces of grass, and invariably lined with the top of the reed, somewhat in the manner of the nest of the Reed Wren, but not so compact in the interior; it is generally placed on a tuft of coarse grass or rushes, near the ground, on the margin of the dykes in the fen; also sometimes

fixed among the reeds that are broken down, but never suspended between the stems." Mr. Mark Pybus writes "I possess a good series of nests with clutches of eggs, taken in the Norfolk Broads. They are composed externally of dead aquatic grasses, and lined with the tops of the reed. They vary much in size and are loosely constructed, and it is difficult to keep the materials in position after the nest is taken from its site." The nest is begun towards the end of April.

Eggs.—The number of Eggs are stated by Mr. Hoy to vary from four to six, and very rarely seven. They are white, more polished than those of the other Tits, and marked with dark brown *lines*, thus differing from all other Tits, both in the eggs and make and position of the nest. Mr. Newman suggests that from these characters this bird seems more nearly to resemble the buntings.

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BEARDED TIT



PIED WAGTAIL

Genus VIII. Motacilla, Linn.

MOTACILLA.—A Wagtail.

This genus is characterised by the great length of tail, being as long, and in some species even longer than the rest of the body. In the wings the first and second quill feathers are nearly of equal length, and then gradually becoming shorter down to the eighth. The legs are rather long and slender; the bill slender, of moderate length, and with a distinct angular ridge down the centre of the upper mandible.

In habits they are fond of the immediate vicinity of water, and are constantly in motion, their movements being performed by running and walking, and not by hopping or jumping, as in the case of many other small birds, and seldom perching. They have also the peculiar habit of moving the tail up and down, more especially when

they first alight, which habit has doubtless given them their popular name of Wagtail. They differ considerably in their summer and winter plumage.

Their food consists of insects.

The nest is either placed upon the ground or on the ledge or crevice of a rock, or similar situation.

The eggs of the British species are of two kinds, either white with lead colour spots, or straw colour with olive spots, very obscure, and almost or entirely burying the ground colour.

We have three species native of this country, one black and white and two yellow, two of them common, and the other not rare but local. Three others are recorded as visitors.

57. PIED WAGTAIL.

Motacilla Yarrellii, Gould.

YARRELLII.—In honour of Mr. Yarrell.

Size.—Length nearly 7½ inches; Expanse 11 inches.

Plumage.—The adult male in summer has the bill black. Eyes dark brown; forehead white, the white extending over and under the eye down each side of the neck as far as the shoulders. Nape, back of neck and back black; in some specimens, probably old male birds, the centre of the back is slaty grey. Wings sooty black, the edges of the secondaries, greater and lesser wing coverts broadly margined with white. Outer tail coverts margined on the outer edge with white. Tail, centre black, the two outer feathers white, except a portion of the inner web. Throat and breast black, belly white, slaty grey at the sides. Thighs sooty black, legs black. Under tail coverts white. (Fig. 1.)

IN WINTER the black on the throat disappears, and the part becomes white, leaving a black crescent across the breast, the horns of which point upward towards the eye. (Fig. 2.)

The FEMALE resembles the male, and passes through the same changes of plumage.

IMMATURE BIRDS are similar to the adult in winter, but the throat and sides of the neck are tinted with yellow.

VARIETIES.—Some authors regard the White Wagtail (*M. alba*) as a form, or rather the type of this species, but it will be treated as distinct among the accidental visitors. The chief points of distinction are that in *alba* the white on the side of the neck joins that upon the breast, and the back is light bluish grey. Many specimens of *Yarrellii* have the back rather light, but the

upper tail coverts are always black, while in *alba* they are bluish grey. Many very striking accidental varieties exist in collections. Mr. F. Bond, F.Z.S., has one with the head entirely white, and another in which all the colours are very pale (fig. 3), killed near Lewes. Mr. J. Whitaker, F.Z.S. has one specimen pure white, obtained at Leeds, and also two young ones pure white, taken from a nest, in Nottinghamshire. Another white specimen is in the Preston Museum, and another in the same collection is coloured similar to fig. 4. One (fig. 4), in a collection of birds at Huddersfield, lately in the possession of Mr. Alfred Beaumont, has the colours indicated about the head by pale ashy brown, which gradually become paler and fainter towards the tail, which is nearly white.

Note.—The note is "a kind of "che-wick," uttered frequently, both when the bird is on the ground, and also when it is on the wing; it has also a very pretty song, sometimes uttered on the ground, and sometimes when perched in a tree or on a wall.

Flight.—The flight is steady, but undulating, raising by moving its wings and falling by closing them, in graceful curves.

Migration.—This species is partially migratory. Early in September those in the northern portion of the island move more south, congregating chiefly upon the sea coast, a few only remaining in favourably sheltered places inland. Some, at least, of those which have bred in the southern counties cross the channel for the continent. They return to their breeding haunts at the end of February or early in March, and may generally be found in some numbers, following the husbandman as he ploughs the land intended for grain.

Food.—Insects form a very large proportion of the food of this species. These

are sought among pebbles and shingle by the side of streams or ponds, upon newly ploughed land, or sometimes upon the tops of houses or out-buildings, or upon grass lawns. It will also feed upon worms, small molluscs, small crustaceans, and the fry of freshwater fish.

IN CONFINEMENT one of these birds has been observed catching minnows from a small tank, and no doubt they will do the same in a state of nature. This bird has several times bred in the Fish House, at the Zoological Gardens.

Habitat.—This species is common in all parts of the British Isles, frequenting such places as those indicated above.

ABROAD.—The range of the Pied Wagtail seems somewhat limited. It is found in Norway, Sweden, Denmark, Holland, France, Spain and Portugal, and has been met with in North Africa. The white Wagtail is the common bird upon the continent.

Nest.—The nest is placed in a hole in a stone wall or rock, very often in the stone work of a bridge; sometimes on the top of a pollard willow; among heaps of loose stones, or other similar situations. Sometimes very odd and peculiar situations are made choice of. One is mentioned in the *Zoologist* (p. 726) as having built its nest under a switch on the Ayrshire railway, at the Lochwinnoch station, where trains passed almost every hour, within a few inches of the nest. It is rather a loose structure of grass, fibrous roots or moss, lined with a little wool or horse hair. The following interesting note is given by Mr. E. H. Rodd ("Zoologist," January, 1878):—"A pair of wagtails did a thing this summer which I should imagine to be unusual. They built in an old rick of faggots which had not been touched for two years and reared a brood. Before the brood had left

L.



PIED WAGTAIL



GREY WAGTAIL

the nest, the old birds took possession of an old nest near by in the same rick, laid their eggs and reared a second brood, continuing to feed the first brood during the second operation of incubation. Before the second brood had flown off, the first had quitted the nest, and the old birds immediately returned to it and, without deserting the second brood, proceeded to lay for a third time. There was every prospect of a third

hatching, but the bird was disturbed—one of the eggs broken in the nest—which caused it to be forsaken."

Eggs.—From four to six eggs are laid; which are white or greyish white, finely spotted with brown and grey, which vary in intensity, and sometimes forms a zone round the large end.

VARIETIES.—Nearly white without spots.

58. GREY WAGTAIL.

Motacilla sulphurea, Bechstein.

SULPHUREA—Sulphur coloured.

Size.—Length, 7½ in.; expanse, 10½ in.

Plumage.—The male in full breeding dress is perhaps the handsomest bird in the whole genus. The bill is dusky brown, darker along the ridge. Eyes hazel. The whole of the upper parts as far as the tail coverts slaty grey, with the exception of a yellowish white line which runs over the eye. Wings very dark brown, primaries almost black, secondaries edged with white, and coverts slightly tipped with the same. Tail coverts bright golden yellow. The tail, which is unusually long, has the outside tail feathers white, the two next partly black on the inner web, the rest entirely black. A triangular black patch extends from the base of the bill to the breast, reaching on each side just below the ear coverts; between the black and grey is a white line. All the rest of the under parts are bright golden yellow. Legs and toes pale brown.

IN WINTER the black throat-patch disappears, the part then being greyish-white; the breast is yellowish-white, shading off to golden yellow at the vent.

THE FEMALE in summer never has the throat as black as that of the male, but is

dingy white, sometimes with a few black feathers; the other colours are also paler and less bright. In winter it resembles the male at the same season.

IMMATURE BIRDS of the year are like the adult female in winter.

VARIETIES.—None known to me.

Note.—This bird is more silent than the Pied Wagtail, and the note is feebler and less distinct.

Flight.—This resembles very much that of the last species, being only slightly quicker; in fact the same mode of flight seems to obtain throughout the genus.

Food.—Insects, small molluscs, &c., like the last species.

IN CONFINEMENT.—Does not bear confinement very well, seldom living many months.

Migration.—This species is partially migratory. Most of the birds leave their breeding quarters for the south in September, and return again early in April, but those from the northern half of England do not cross the channel, but remain, for the most part, during winter in the southern counties. Some are found in the north of England during winter, but probably they

are those which have migrated from a more northern portion of the Island.

Habitat.—The favourite haunts of this species during the breeding time is among the mountain streams in the north of England, and southern portion of Scotland, secluded and away from human habitations in such situations as those frequented by the Dipper; in fact both species are generally found together. It is less common in the north of Scotland and in Ireland, and in the south of England during summer it is rare.

ABROAD it is found in many parts of Europe, rarer in the north; also in Madeira, India, Java, and Japan. Mr. Seebohm says it extends from the Atlantic to the Pacific, breeds through central and southern Europe, also in Asia, as far south as Persia, Turk-

estan, Cashmere, South Siberia, and Japan; resident in the Canaries, the Azores; winters in North Africa, Palestine, India, Ceylon, the Andaman Islands, Java, Burmah, some of the Phillippian Islands, Formosa and China.

Nest.—The nest of this species is always placed near some mountainous stream, on shelves of a rock, or among loose stones. One sent me from Ireland has the outside composed entirely of fibrous roots, lined with horse-hair, a little wool, and a few feathers. Sometimes moss is used in the construction.

Eggs.—The number varies from four to six. The ground colour is drabish or yellowish white, indistinctly blotched and spotted with pale ochre brown.

VARIETIES.—I have never seen a variety.



GREY WAGTAIL



RAY'S WAGTAIL

59. RAY'S WAGTAIL

OR

YELLOW WAGTAIL.

Motacilla Rayi, Bonapt.

RAYI.—In honour of Ray.

Size.—Length, 6½ in. ; expanse, 10½ in.

Plumage.—The adult male in summer has the bill nearly black. Eyes very dark brown. Top of head, ear coverts, back of neck, and the whole of the back, yellowish olive-green, darkest on the back. The tail has the two outer feathers white on the outer, and part of the inner web; the rest nearly black. Wing coverts and secondaries dark brown, broadly edged with yellowish white; primaries dark brown. A streak over the eye and the whole of the under parts bright gamboge yellow. Legs and toes black.

THE FEMALE has the back more of a brown colour, and the yellow parts are not so bright.

Both sexes in winter lose most of the yellow tints, and the under parts become yellowish drab, nearly white in some places.

IMMATURE BIRDS of the year are the same as the adults in winter, but have an indistinct darker band across the breast.

VARIETIES.—The only variety I have seen of this species is in the rich collection belonging to Mr. J. Whitaker, F.Z.S., of Rainworth Lodge, Notts. The parts usually dark are very pale drab, the under parts and tail nearly white. It was obtained from the late Dr. Hobson's collection. (fig. 2.) Occasionally very old birds have head, neck, and the whole of the upper parts bright yellow.

This species is considered by some as a form of the grey-headed Wagtail (*M. flava*) of the Continent.

Note.—The call consists of two distinct notes, a higher and lower one, more shrill than that of the pied species.

Flight.—The flight consists of the same undulatory motions which characterize the whole of the Wagtails, and the same vertical motion and expansion of the tail is performed when the bird first alights.

Migration.—This is a true migratory species, arriving in this country at the end of March or the first half of April, and leaving again for the south early in September.

Food.—This consists of insects, small worms, snails, slugs, spiders, &c.

Habitat.—This bird is common during summer all over England, in suitable places. In Scotland it is not so common, and in Ireland it is only a rare visitor. It seems not so partial to the immediate vicinity of water as the other two species, but may be found on comparatively high land in stubbles and pastures, but may also be seen in low meadows bordering rivers.

ABROAD it breeds in central and western Europe; has been found in Turkestan, and winters in Africa.

Nest—The nest is placed upon the ground in a field of young corn or grass, or on a river bank. It is rather loosely made of dry grass, roots, and sometimes bits of moss or wool, lined with finer roots and hair.

Eggs.—From four to six eggs are laid. The ground colour is yellowish or pinkish

grey, thickly but obscurely freckled with yellowish or brownish olive, sometimes with a black wavy line at the large end. The eggs of this species are very similar to those of the Sedge Warbler.

VARIETIES are rare. Mr. Bond has seen two or three nests in which the eggs were of a bright buff colour.

LIX



RAY'S WAGTAIL

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LIX



RAY'S WAGTAIL

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TREE PIPIT.

Genus IX. Anthus, Bechstein.

ANTHUS.

The members of this genus are chiefly ground birds, the bill is of moderate thickness, with the ridge at the base slightly elevated. The wings have the first three quill feathers of nearly equal length; the tertials are long. The outer toe is united to the middle one at the base, and the hind claw is long and curved.

They feed upon insects, and one species is a summer migrant.

They nest upon the ground, and the eggs run through shades of brown and red.

Three species are native of this country, and four others have occurred as visitors.

60. TREE PIPIT.

Anthus Arvensis (Brisson).

ARBOREUS.—*Arbor* (Lat.)=a tree.

Size.—Length, 6½ in.; expanse, 11 in.

Plumage.—Bill pale horn colour, lighter at the base of the lower mandible. Eyes brown. Top of head, ear coverts, and back olive brown, dark brown in the centre of each feather. Wing coverts and tertials brown, broadly margined with pale buff; primaries and secondaries blackish brown, with narrow buff margins. Tail, outer feathers white on the outer and most of the inner web. The second feather has a white spot at the tip on the inner web. A pale streak extends over the eye. Throat, breast, and under parts buff, with a series of dark spots beginning at the base of the lower mandible and extending down each side and across the breast; legs brown.

THE FEMALE resembles the male, but not quite so large or so bright in colour.

IN WINTER the back becomes more olive, and the breast deeper in colour.

This and the following species are very similar in plumage, but the following points pointed out by Mr. Yarrell, will serve to distinguish the two. The Tree Pipit is rather larger, the beak stronger, the spots on the breast larger and fewer in number, the claw of the hind toe not as long as the toe itself, tertial feathers of the wing longer

in proportion to the primaries, white on outer tail-feathers not so large nor so clear.

IMMATURE BIRDS are similar to the old birds in winter.

VARIETIES.—Mr. Bond has one very much pied with white, which is given upon the plate (fig. 2.) There is a white one in the rich collection belonging to Mr. Marshall, of Taunton.

Note.—This species has a very pretty song, its beauty being enhanced by the elegant manner of the bird while uttering it. From some favourite branch, generally the uppermost of a tree or bush, the bird ascends on quivering wings, uttering its "chee, chee, chee," until a considerable elevation is attained, and then the bird opens its wings and sailing down in a graceful curve, quickening its note as it descends, settling at last, in most cases, on the very branch from which it set out, but sometimes upon the ground.

Flight.—The flight described above is very characteristic of this species.

Migration.—This is the only species of the genus which leaves this country. It generally appears in Yorkshire about April 7th, earlier in the south and later further north, departing again in September.

Food.—Insects form the chief of the food of the Tree Pipit, but it will also eat seeds of small plants.

IN CONFINEMENT the Pipits may be fed upon meal worm, "ants eggs," crushed hemp seed, and the paste recommended for Nightingale, but the birds, especially the Tree Pipit, are rather delicate, and difficult to keep healthy.

Habitat.—This is a common Summer bird in almost all suitable parts of England, frequenting woods and cultivated districts. In Scotland it is less frequent. Gray in his "Birds of the West of Scotland," says that the only place where he has found it in any abundance is in the vicinity of Glasgow, and Dr. Sexby does not include it in his "Birds of Shetland." From Ireland it had not been recorded previous to 1878 (Zool. Sept.), when two were seen and heard near Dublin.

ABROAD.—It is a Summer migrant to all the European countries, except the extreme north. It is also found in Maderia, Malta, Sicily, North Africa, India, China and Japan. The Indian specimens are brightly coloured.

Nest.—The nest is placed on the ground, generally on a sloping bank, covered by long herbage, a tussock of, which will be frequently found overhanging the structure and hiding it from view. Outside it is composed of dry blades of grass and fibrous roots, a little moss being sometimes interwoven, and the inside being lined with finer material and hair.

Eggs.—Perhaps the eggs of no British bird, certainly those of no land bird varies so much as the Tree Pipit, and it is very

difficult to say what is really the type. The following forms are of regular occurrence:—

FIG 1.—Yellowish drab, thickly freckled with purple red, forming a zone at the large end.

FIG 2.—Ground pinkish red, with purple-red shades, and odd dark purple-brown spots and lines.

FIG 3.—Ground stone grey, with pale purple shades, overlaid with darker shades of rich madder brown, over which again are dark purple brown spots and lines. Sometimes the spots and shades predominate at the large end, at at other times both ends are equally spotted. This is the most beautiful form of the egg.

FIG. 4.—Ground stone grey, overlaid with soft shades of vandyke brown, which in some places concentrate into almost black spots.

FIG. 5.—Ground bluish stone colour, with a zone of soft purple brown shades and spots near the large end, and odd spots on other parts of the eggs, some being pale and appearing as if covered by a portion of the shell.

The following varieties are of less frequent occurrence:—

FIG. 6.—Ground pinkish drab, with distinct black spots principally at the large end, most of which were surrounded by a purple shade.

FIG. 7.—Ground stone grey, with numerous scattered stains and blotches of yellowish olive brown, and one or two black lines

FIG. 8.—Bluish green, sparingly blotched with amber brown. This is a rare form.

All the eggs figured are from my own collection.

The number laid is five or sometimes six

L X



T R E E P I P I T



MEADOW PIPIT

61. MEADOW PIPIT.

Anthus pratensis, Linn.

PRATENSIS.—Of the meadow.

Size.—Length $6\frac{1}{4}$ in. ; expanse $9\frac{1}{2}$ in.

Plumage.—The plumage of this species is very like that of the Tree Pipit, but has less of the ochre tint on the under parts, and not so much olive tinted above. See also last species for other distinctions.

THE SEXES are similar, but the female is rather smaller.

Like the Tree Pipit, both sexes assume a more olive tint after the autumn moult.

VARIETIES.—Mr. Bond has two pale cream coloured, and another pied with white, similar to the variety of Tree Pipit figured. He has also heard of one entirely white. Mr. Thompson of Belfast describes one having the crown of the head primrose yellow ; back white, the feathers edged with yellow. Wings, white with a few primaries of the normal colour. One half of the tail white, edged on each feather with primrose. The lower part of the breast, and a few odd feathers here and there of the ordinary colour. Bill and legs paler than usual.

Note.—The song of this species somewhat resembles that of the Tree Pipit, consisting of a succession of similar notes resembling "tsee, tsee, tsee," begun slow and quickened towards the finish ; but the bird does not perform the same graceful spiral evolution, but when singing is generally upon some slightly elevated mound. Occasionally it will ascend 40 or 50 feet into the air, and come down again singing, but the descent is more in the line of ascent, not in a curve like the last species, returning to the ground, or a wall or elevated stone, seldom perching on trees.

Flight.—The ordinary flight is rather undulating, and generally for short distances. It has also a song flight described above.

Migration.—The Meadow Pipit is resident in this country through the year, but many of those from the most northern parts leave for the southern portion in the autumn, returning again in the spring, but it is not supposed that any leave England.

Food.—This consists of small insects of all kinds, snails, and small seeds.

Habitat.—This is a moorland bird, and is abundant, especially during the breeding season, upon the higher grounds on skirts of woods principally, in almost any part of Britain. During winter, it descends to lower meadows and rough places, and may frequently be found during winter in stubbles where there are plenty of weeds.

ABROAD it is found in all the European Countries as far north as Lapland. In parts of Africa, Asia Minor, and perhaps also in India in winter.

Nest.—The nest is placed upon the ground a favourite place being upon the moor edges near the cultivated ground. I have also frequently found it upon the sandhills near the sea coast. It is composed of dry blades of grass, lined with bents and horse hair. The nest of this bird is more frequently used by the cuckoo than that of any other species.

Eggs.—The eggs of this species do not run through the same varieties as those of the Tree Pipit, being stone grey, more or less dashed and freckled with umber brown and ash grey, the brown sometimes almost entirely obscuring the ground colour, and occasionally with a few black lines. Sometimes they are of a reddish tint. Two forms are given upon the plate from my own collection. The number varies from four to six.

VARIETIES.—Mr. Hewitson mentions one not unlike that of the Pied Wagtail.



MEADOW PIPIT

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MEADOW PIPIT



62. ROCK PIPIT.

Anthus obscurus, Linn.

OBSCURUS.—?

Size.—Length $6\frac{1}{4}$ in.; expanse 11 in.

Plumage.—Bill horn colour, dark at the tip and along the upper ridge. Top of head, ear coverts, and back olive-green, each feather on the head and back having a dark centre. Wings dark brown; the coverts and tertials broadly margined with pale ochreous drab. Primaries dark brown with very narrow pale borders. Tail dark brown, the feathers margined with pale colour, and the outer feathers being dirty white on the outer and part of the inner webs. A pale line runs over the eye. Throat, breast, and under parts pale ochreous drab, a broad streak of olive brown extending from the base of the lower mandible downwards, and the centre of each feather on the throat having a narrow, and those on the breast a broad, obscure dash of olive brown, shaded at the edge into the lighter colour. Legs dark brown.

THE FEMALE is similar to the male, but rather smaller.

VARIETIES.—Mr. Bond had one entirely white specimen, shot in the Isle of Wight, and Mr. Whitaker has one with the mandibles very much elongated and crossed. Yarrell mentions one having the head, back, and under parts white.



Head of Mr. Whitaker's specimen.

Note.—Dr. Saxby says "The short and pleasing song, accompanied by the same singular actions so well known in the Tree Pipit the only difference being the substitution of a rock for a branch begins about the 12th of March, perhaps never earlier, continuing until

the hatching of the first brood. I have observed that, as with the skylark, the first song is invariably heard on a fine sunny day."

Flight. The flight, like that of the other pipits, is only for short distances, from one stone to another.

Migration.—This species is resident on our coast throughout the year.

Food.—Small insects, and the crustaceans of small size, so numerous among shingle and sea-wrack, forms the food of this bird

Habitat.—The Rock Pipit is common on most of the coasts of England, Scotland and Ireland. In the North it is abundant. At Flamboro Head, in Yorkshire, I have found them very numerous.

ABROAD it is found in all the northern countries of Europe into the Arctic Circle.

Nest.—I quote Dr. Saxby's account, he having had many opportunities of observing this species in Shetland; he says "They pair about the middle or end of March, but eggs are very rarely found before the end of April. The nest is composed entirely of dry grass, finer towards the inside; more than once I have found a small quantity of dry sea-wrack intermixed, but only on two occasions have I observed horsehair in the lining, and in each instance a stable was very near at hand. It is usually situated under a large stone, either upon the turf summit of a cliff or upon the beach; less frequently it is found in holes of banks, in rabbit burrows, in loose stone walls, and in crevices of rocks, often half-way down a high sea cliff. Occasionally I have found the nest several hundred feet above the sea level, at the base of a large stone, well concealed among grass and heather; but I cannot call to mind one single instance in which the nest has been so placed that the sitting bird could not obtain a view of the open sea."

Eggs.—The eggs vary in number from four to six. They vary in tint, but are generally of a grey or dull yellowish-grey ground colour, with brown or purplish-brown freckles.

Hewitson says they sometimes resemble those of the skylark, but have never the greenish tinge peculiar to the eggs of that species.

VARIETIES.—None known to me.

LXV



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ROCK PIPIT.



1861

1861

ALAUDIDÆ.

Genus 1. *Alauda*, Linn.

ALAUDA.—A Great Songstress: from (Celtic)=high or great, and *aud*=a song.

Bill rather conical; feathers on the head elongated and forming a crest. First quill rather very short. Tail, outside feathers longest. Hind claw long and straight.

They nest upon the ground, and the eggs are freckled with various shades of brown.

Only two species are indigenous in this country, and four others occur as occasional, or accidental visitors.

63. SKY LARK.

Alauda arvensis, Linn.

ARVENSIS. = Of the field.

Size.—Length $7\frac{1}{2}$ in.; expanse 14 in.

Plumage.—Bill brownish horn-colour, yellowish at the base of the lower mandible, eyes hazel. Each feather on the top of the head and back is almost black in the centre, shading off to brown and then to grey at the edges; those on the head being elongated, and capable of being erected into a crest. The wing-coverts and tertials are of the same colour, with broad pale edges. The two middle feathers of the tail are the same colour; the rest of the tail dark brown, except the two outer feathers which are white on the outer, and part of the inner webs. Primaries dark, with narrow pale edges. Over the eye is a pale streak, and a pale shade extends round the ear-coverts. Under parts yellowish-white with dark elongated spots on sides of throat and breast. Legs light brown, the hind claw very long.

THE FEMALE is rather smaller, and the crest not so long.

IMMATURE BIRDS of the year, have the pale edges of the wing-coverts very broad, and a white-tipped black spot at end of each of the lesser ones.

VARIETIES.—This bird seems subject to vary, or perhaps its extreme abundance, and the large quantity which have been annually killed or caught has turned up varieties apparently more commonly than they really exist. The following have come under my notice:—

MELANIC.—In confinement this bird frequently turns very dark brown or black, perhaps on account of some peculiarity of food. I have such a black specimen in my collection. Another similar one is in another Huddersfield collection. Sometimes, however, these melanic varieties occur in a state of nature, one of which is figured (fig. 2) from Mr. Whitaker's collection. Another is recorded in Thompson's "Birds of Ireland," and Mr. Gurney has a black one pied with white.

PIED.—Mr. Whitaker has one with a distinct white patch on the throat, belly white, and a band of the ordinary colour across the breast; four primaries and three or four tail feathers white, back ordinary. Mr. Marshall of Taunton has also a pied one in his collection. One is described by Thompson having the primaries, secondaries, and tail snowy white. A pied one is recorded by Mr. Gunn (Nat. 1864, p. 140). I have also seen another pied one in a collection at Leeds.

PALE COLOURED.—Mr. Whitaker has two killed near Cambridge in which all the colours have a bleached appearance; one of these (fig. 3.) is given upon the plate. Another killed at Saffron-Waldon, has the dark colours indicated by pale reddish-brown. Another has the tail and primaries white and the rest a pale grey-drab. One, also in the same collection, and killed near Newark, is silvery grey with the margins of the feathers white. Another, killed in Sussex, has the upper parts uniform red-brown (fig. 4). Mr. Bond has also several very interesting varieties, one of which is sim-

ilar to fig. 3, and another is a rich pale red-brown in the dark markings. Mr. Gurney has a slate-coloured one, purchased in Leadenhall Market, and one in the York Museum is yellowish-drab.

YELLOW OR WHITE.—One in a collection lately belonging to Mr. Alfred Beaumont is of a yellow. Mr. Whitaker has one, killed in Notts, which is very pale buff. A buff one is recorded—Zool. June 1877. One pure white, with bill and legs pale, but eyes dark, was shot on Askham Bog, near York, Feb. 1877, and recorded in the Zoologist for that year. A similar one, but having pink eyes, is recorded (Nat. 1866, p. 147.) as having been killed near North Walsham, in Norfolk. A true albino is also recorded by Thompson. Mr. Whitaker has a pure white specimen in his collection. Another white one is in Mr. Marshall's collection, and another is recorded in Hancock's "Birds of Northumberland and Durham." I have in my own collection, a male which is white with a slight canary tint; it was taken, when young, from a nest at Lepton, near Huddersfield. The nest contained four—two of the ordinary colour, and two white.

Note.—The song of the Sky Lark is so well known as to need no description. It is one of the first to be heard in a morning; I have heard one singing, perched on the top of a wall, by two o'clock, just as the day was beginning to dawn. The song is commenced during the first fine sunny days of March, or even earlier, and is one of the first events, after the long winter months, to tell the lover of nature of the advent of coming spring.

Flight.—The upward song-flight, as well as the soft low progressive flight are very well known.

Food.—Insects, worms, and small seeds. In the autumn, and during severe weather they eat the young blades of wheat, sometimes doing considerable damage. They also eat quantities of clover, and leaves of turnip.

IN CONFINEMENT this is one of the most favourite cage birds, yet it seems almost a pity that a bird whose nature is to soar aloft, should ever be confined within the narrow limits of a cage. Any cage in which a Lark is kept should have plenty of sand and gravel in the bottom

in which the bird delights to rustle, and the end of the cage should have a freshly cut patch of turf. After being taken from the nest, he must be fed upon scalded crumbs of bread, scalded rape seed, or "ant's eggs." When a little older mealworm, yolk of hard-boiled egg, German paste, sponge cake, and watercress may be added. Diarrhæa may be cured by a little dry cheese grated into the food, or scalded into the water. When scab appears at the base of the bill, watercress should be given.

Migration.—The Sky Lark is found in this country throughout the year. In winter they flock, and in severe weather leave the northern parts of the island for the south, where their numbers are greatly increased by arrivals from the Continent. Some of those from the southern counties cross the Channel.

Habitat.—This bird is found in every part of Britain, even, as stated by Grey, in some of the most inhospitable islands of the Hebrides, inhabiting field, meadow, or moor.

ABROAD it is met with in almost all parts of Europe, but is only a winter visitor to most of the countries bordering on the Mediterranean. It is also found in North Africa, Arabia, Persia, North China, Japan, Siberia, and Kamtschatka.

Nest.—The nest is placed in a hollow in the ground, generally in a grass field, or on a moor. It is composed of dry grass, lined with finer grass and bents.

Eggs.—Four or five eggs are laid, the ground-colour being dull white, or yellowish white, in most cases almost entirely obscured by freckles and blotches of olive-brown, or lowish-brown, or reddish-brown, often forming a zone round the large end.

VARIETIES.—The eggs of this species vary much in tint both of ground-colour and of markings. Figs. 3, 4 and 5 were laid by a bird kept in confinement by Mr. Geo. Harker of Liverpool in 1883. The same bird laid several others, curiously marked. Fig. 6 represents one of two similar in colour, in the possession of Mr. J. Whitaker, F.Z.S., and taken from a nest this season (1884). Mr. Bond has a clutch of four which are dull brown with many speckling, but with the small ends nearly white; he has also had some almost white



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WOOD LARK

64. WOOD LARK.

Alauda arborea, Linn.

ARBOREA.—*Arbor* (Lat.)=a tree.

Size.—Length, about 6 in.; expanse a little over 1 ft.

Plumage.—Coloured somewhat like the Sky Lark but more of a red-brown. The bird is also smaller, the streak over the eye as well as the dark spots on the breast more distinct, and the tail shorter. Spurious wing feathers black tipped with dull white.

THE FEMALE is rather smaller than the male.

IMMATURE BIRDS are redder, and the feathers on the back and head tipped with light buff.

VARIETIES are rare, the only ones I have seen are, a pied one (fig. 2) in Mr. Whitaker's collection; and another in my own collection, having a few white feathers in each wing, and one or two in the tail.

Note.—The song of this species is considered superior to that of the Sky Lark in quality of tone, though inferior in power and variety. Sometimes while singing, the bird is perched upon a tree, but more frequently it is ascending into the air by means of a spiral flight, and having attained the desired elevation hangs poised upon its wings, where it sings for awhile, sometimes an hour or more, and then without ceasing descends by another spiral to a tree or to the ground. It sometimes sings in the night in hot summer weather.

Flight.—The flight above described is very characteristic of this bird.

Food.—Insects of all kinds, small worms, and seeds when nothing else can be had; also grass, clover, and young wheat leaves.

IN CONFINEMENT the Wood Lark should be treated similar to the Sky Lark, and like

all other birds does best in a large aviary. Hard-boiled egg and bread crumbs will form its principal food, with hemp seed, and any kind of insects. Grated carrot mixed with soaked bread and brown sugar and rubbed through a sieve is also recommended. The cage should be hung out on sunny days.

Migration.—This species is more or less migratory in this country, depending on the severity of the weather and probably other causes.

Habitat.—This cannot be said to be an abundant species, but it is found, not uncommonly in Devonshire, and from thence more or less commonly as far north as Strathfordshire. It is also met with less frequently in some parts of Wales, Lancashire, East Yorkshire and some other counties. It has also been met with and even known to breed in various places in Scotland, and the same remarks apply to Ireland. It frequents borders of woods in uncultivated districts.

ABROAD it is a summer visitor to the South of Norway and Sweden, Mid Russia, and North Germany; it is found in summer in Turkey, Asia Minor, Palestine, and less commonly in Italy, France, Spain, and North Africa.

Nest.—The nest is placed upon the ground near a wood, generally where the herbage is rank, near a tuttock or among heather. It is composed of dry grass and moss, lined with finer grass.

Eggs.—Four or five eggs are laid. The ground colour is white or with a yellowish or greenish tinge, freckled or blotched with brown or purple brown more concentrated and sometimes forming a zone at the large end. The first eggs are laid by the end of March, and there are several broods in a year.

VARIETIES.—None are known to me.

LXIV



WOOD LARK





SNOW BUNTING.

EMBERIZIDÆ.

Genus 1. *Emberiza*.

EMBERIZA.—?

This genus of birds differs from those which have preceded it, and agrees with some which will follow in having the bill of a conical form, thick at the base and strong, adapted for cracking or husking seeds. In the present genus the lower mandible is as wide as the upper one, the edges of both being bent inward so as to give the bill somewhat the appearance of a pair of round-nosed pliers. A knob or tooth projects from the underside of the upper mandible. First primaries

very short, the fourth and fifth being the longest in the wing. Tail, the outside feathers slightly longest. Generally the males are conspicuously or brightly coloured and their appearance is different between summer and winter, not by any actual moult but by the wearing away of the differently coloured margins of the feathers. We have five native species all to be found throughout the year, but the first to be mentioned is much more abundant in winter than in summer. Five others have been recorded as accidental visitors.

65. SNOW BUNTING.

Emberiza nivalis, Linn.

Sno Sparf, (Sweden).

Alap, (Lapland).

Snefugle, (Denmark).

Trapaluarsak, (Spitzbergen).

NIVALIS.—Of the snow.

Plumage.—The adult male in summer dress has the bill black. Eyes hazel. Head, neck, and the whole of the under parts pure white, or with a few black feathers on the top or sides of head. Back jet-black, mottled with grey on the rump. Upper wing-coverts and secondaries white, or the latter blackish at the base; spurious wing black, primaries and tertiaries black, the former dusted with white at the base, and the latter upon the outer web. Middle tail-feathers black, the three outer ones white with a black patch near the tip. Legs and claws black. (Fig. 1.)

THE FEMALE IN BREEDING DRESS is similar to the male but more shaded with dusky on the head and upper parts.

THE ADULT MALE IN WINTER has the bill yellow, dark at the tip. Head and neck white, shaded with rust-brown and chestnut, caused by the margins of the feathers being of that colour. The back black, more or less obscured by the rust-brown edges of the feathers. The wings are similar to those of the summer bird, but the tertiaries are margined with dull-brown.

Upper tail-coverts black, with brownish or whitish margins. Tail like the summer bird. Lower parts dull white, tinged with rust-colour on the breast and sides. Legs black.

THE FEMALE IN WINTER has the top of the head, chin, and throat dull chestnut, paler behind; the upper parts are mottled with blackish-brown and dull chestnut. The only white upon the wings is the lesser coverts and the base of the secondaries. Tail as in the male, but duller. Under parts dull white, deeply shaded with dull chestnut across the breast. (Fig. 2.)

In the winter dress it was formerly called the Tawny Bunting.

The change from winter dress to summer is caused by the brown edges of the feathers being worn away; and leaving them clear white or black.

THE YOUNG are at first covered with sooty down.

IN IMMATURE PLUMAGE both sexes have the bill yellow with tip dark. Head and upper parts greyish-olive, lighter towards the tail. All the white parts are tinged with grey or yellow-

ish, and with rust-brown on the breast and sides.

Varieties.—The only one I have seen which can be classed as a variety is in Mr. Bond's collection. It is dull white, tinged with brown only at the sides of the head and breast. (Fig. 3).

Note.—The song of the Snow Bunting is described as being exceedingly lively and pretty. Mr. Seebohm in his "Siberia in Europe" says "They would fling themselves up into the air almost like a shuttle-cock, singing all the time a low warble, not unlike that of a Shore Lark, or perhaps still more like that of the Lapland Bunting, and they would immediately descend in a spiral curve, with wings and tail expanded, and finish their song on a rock." A writer in Science Gossip (May, 1870) describes the song of one he kept in confinement as being very like that of the hedgessparrow. This bird sang only during the night.

Flight.—They fly very close in flocks. Dr. Saxby says "Their flight is always in a compact body; and frequently before settling on the ground, they make sudden whirls, coming almost in collision with each other, at which time a peculiar note is produced. . . . Seen against a dark hill-side or a lowering sky, a flock of these birds presents an exceedingly beautiful appearance, and it may there be seen how aptly the term 'Snow-flake' has been applied to the species. I am acquainted with no more pleasing combination of sight and sound than that afforded when a cloud of these birds, backed by a dark grey sky, descends as it were in a shower to the ground, to the music of their own sweet tinkling notes."

Migration.—This bird is principally a winter visitor to these islands, arriving on the east coast, about the end of October, or early in November, but individuals may be seen earlier. The first arrivals consist mainly of young birds and a few females. Their numbers seem greatly affected by the season; great numbers arriving in severe winters, while in mild winters very few are to be seen. Some remain here to breed.

Food.—Their principal food during their winter stay with us is seeds of grass and other

plants, especially those of *Schoberia maritima* and *Glaux maritima* upon their first arrival.

IN CONFINEMENT canary, rape, hemp, millet and other seeds might be given, but the Snow Bunting is not a long lived bird in confinement, though they have been known to breed in captivity. Mr. Gregson of Liverpool has had thirty of them at once in his aviary, caught upon his warren at Crosby.

Habitat.—This species frequents hilly districts, being found in winter on the coast and hills, and in summer on the mountain tops. As before stated it is a common winter bird in the north of Britain, especially upon the east coast, but in summer it is confined to the high mountains of Scotland, where it has been observed by Messrs Nicholas Cooke, Harvie Brown, Wm. Hamilton, Macgillivray, Col. Drummond-Hay and others, the actual points of observation being the summit of Ben-na-mukdhui, Lochabar, Ben-y-Bhean, Craig Maige, and Lochnagar, as well as in Banffshire, Ross, Aberdeen, Inverness, and by Dr. Saxby in the Shetland Isles.

ABROAD it has been observed as far north as travellers have been able to penetrate. It is met with to the north of Spitzbergen, where few other passerine birds are seen. In Iceland it is the commonest small bird, and is met with at all seasons. It also breeds in the Faeroes, Greenland, and Norway, but less commonly in Sweden. It is also known to breed in Lapland, North Russia, Siberia, and across the whole of the most northern parts of the New World. In winter it migrates southwards, and is then found in the South of Canada, Newfoundland, Nova Scotia, North of France, and North Germany, and occasionally even more south. Mr. W. Oxenden Hammond records (Zool. Feb. '81) the nesting of a pair of Snow Buntings in a crevice under the sill of a window on one of the highest and wildest passes of the Maritime Alps," but it is possible that the birds observed by him were the Snow Finch (*Montifringilla nivalis*).

Nest.—The nest has several times been met with, and no doubt the birds breed every season upon the higher Scotch mountains, Dr. Saxby found it on several occasions in

LXV



SNOW BUNTING.



BUNTING

Shetland. It is placed among loose stones, and is rather loosely constructed of dry grass, lined with finer grass, roots, moss, and feathers, generally those of the Ptarmigan.

Eggs.—From four to six, and sometimes more are laid, the ground-colour being greenish-white, freckled, and some-

times streaked with red-brown, and lighter purple shades, and frequently a few black lines. The green-tinted ground-colour, with bright red and purple spots, render some of these eggs exceedingly beautiful.

I am indebted to Mr. C. S. Gregson for a supply of these birds in the flesh; the upper figure is taken from one of them.

66. BUNTING.

Emberiza miliaria, Linn.

Also called Common Bunting, and Corn Bunting.

MILIARIA, from millet, a kind of seed.

Size.—Length about $7\frac{1}{4}$ in. expanse 1 ft. 1 in. to 1 ft. 2 in.

Plumage.—Bill yellowish, with a dark brown line along the upper ridge. Eyes hazel. The whole of the upper parts has each feather yellowish-brown, lighter on the edges and a dark, almost black line down the centre. Wings umber-brown, with pale drab or yellowish-drab margins, narrow on the primaries and broader on the rest of the wing. Tail the same colour. Throat, sides of neck, and under parts dingy white, tinted with buff on the breast and sides, streaked on the latter, and spotted with arrow heads on the former of a blackish-brown. Legs and claws yellowish-brown.

THE SEXES are similar in colour.

IMMATURE BIRDS are also very similar to the adults, but more tinted with pale yellow.

VARIETIES of this species are fairly numerous, chiefly pied or pale-coloured.

PIED.—A figure is given of a very pretty pied one in Mr. Whitaker's collection, and

he has four more specimens and a sixth with head and shoulders white. A pied one is in the York Museum. Mr. Bond has seven or eight pied specimens killed in Cambridgeshire, at Farnham, and other places; he considers pied birds common.

PALE-COLOURED. Fig. 3, represents a specimen in Mr. Whitaker's collection, killed at Newstead Abbey in 1883. I have seen a pale ochreous one killed at Flamborough Head, and fig. 2 represents a pale specimen in Mr. Gregson's collection.

WHITE.—Mr. Bond has a white one tinted with lemon, and another pure white—a true albino. Mr. Marshall of Taunton has two white ones, and Mr. J. H. Gurney, jun. has another.

Note.—The song, if it can be called such, of this bird is a somewhat harsh grating sound, consisting of "chi chi" begun slow, and run out to a trill. The latter part of the note is similar to rubbing ones wet finger against a window pane. When singing the bird is generally perched on the top of a wall or hedge, but sometimes it sings on the wing.

Flight.—The flight is generally in a more or less straight line, but heavy and somewhat undulating, caused by alternate

flappings and cessations of the wings.

Migration.—The Common Bunting is a resident with us throughout the year. In summer they may be found in pairs, but in winter they associate in small flocks, or with other hard-billed birds, and may then be found about farm yards and corn ricks.

Food.—Seeds and grain of various kinds forms the staple food of this bird, corn coming in for a large share of consumption. In the stack-yard the Bunting is a destructive bird, in hard weather during winter, and I do not remember ever having had one in my hand that was not plump and fat.

IN CONFINEMENT this bird has not many attractions except for those who wish to study its habits in an aviary. All the Buntings should have a mixed food, consisting of oats, hemp, millet, bread crumbs, meat, insects, and a paste made of grated carrot, bread, and barley meal. They should also be supplied with water, and also with gravel in which most of them delight to bathe or rustle.

Habitat.—The Bunting is found throughout Britain, from Land's End to the Shetlands, though less commonly in

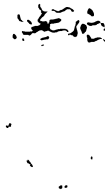
the north than in England. In many parts of Yorkshire it is abundant. It frequents fields and cultivated parts, particularly on the higher grounds.

ABROAD it is met with more or less commonly throughout South and Central Europe wherever corn is cultivated. It is also found in North Africa, Persia, and Turkestan.

Nest.—The nest is begun sometime during May, and is placed on a bank among coarse grass or brier, or in a field among clover or tares, either upon or very near the ground. It is composed of coarse grass and straws, and lined with finer grass roots, and sometimes hair.

Eggs.—From four to six. They are grey tinged with yellow or purple with irregular blackish-purple streaks, blotches, or spots, and frequently lighter shades; sometimes they have a purplish-brown tint, and others have the ground nearly white.

VARIETIES.—The four figured upon the plate are from Mr. C. S. Gregson's collection, and exhibit extreme forms of the variable egg.



BUNTING



REED BUNTING.

67. REED BUNTING.

Emberiza schœniclus, Linn.

This bird has been called the Black-headed Bunting, but that name rightly belongs to another species *E. melanocephala*, and the latter having occurred in Britain the name of Reed Bunting must be restored to our native bird.

SCHœNICLUS. Probably from *scionos* = a rush.

Size.—Male length 6 in., expanse 9½ in. Female rather smaller.

Plumage.—Bill brownish, upper mandible darkest. Eyes hazel. In the summer the male has the upper part and sides of the head coal-black. Below this is a white collar which joins a white stripe which extends from the base of the lower mandible. Back and wings dark brown, reddish in places, and each feather bordered with ochreous, particularly on the wing-coverts and secondaries. Quill feathers dark brown with narrow pale edges. Tail dark brown, the two middle feathers with pale edges, and the two outer ones white on the outer edge, and a large white spot on the inner web. Throat black. Under parts white, tinted with ash-colour, and streaked with brown at the sides. Legs and toes pale brown.

THE MALE in winter has the feathers of the head and back broadly margined with pale brown, so much so as to almost hide the black of the head.

THE FEMALE has the upper part of the head and ear-coverts dark brown, each feather with a pale margin. A stripe round the ear-coverts pale ochreous-brown. Back, wings, and tail similar to those of the male. Throat yellowish-white, an indistinct streak of brown on each side. Breast yellowish white, with streaks of brown, lower parts white streaked with brown at the sides.

IMMATURE BIRDS resemble the female, but the pale ochreous borders to the feathers on the head and back, and the redder ones on the wings are very broad. The streaks on the breast and sides are not so clear as in old birds. The black head in the male is assumed in the spring of the second year.

VARIETIES.—In the "Life of a Scotch Naturalist" (p. 401) a black specimen is recorded as having been seen by Mr. Edward near Banff, and another "almost yellow." A figure (Fig. 3.) is given of one in Mr. Whitaker's collection, and he has another greyish-white mottled with rust red. Mr. Bond has a pied specimen, and another pied one is recorded (Nat. 1864, p. 147) as having been shot on the Heigham Marshes near Norwich. Mr. Bond has one dingy white (Fig. 4.) obtained many years ago from the late Hugh Reid of Doncaster, and probably killed near that town; and he has another pure white, shot in Berkshire and presented to him by the late John Gould. A white-one is in Mr. Marshall's collection, and another is recorded in the Zoologist p. 7845. One in the Preston Museum is white with the head drab. Mr. Kerry sent me a beautiful female killed near Harwich, with part of each wing white.

Note.—The song of this bird is not very musical but still pleasant to listen to. It resembles "chiv, chiv, cheer, chiv, chiv." The male bird will sit and swing on a reed stem cheering his mate by his few simple notes.

Flight.—The flight is generally in a somewhat straight line, but with slight undulations.

Migration.—This bird is found in this country throughout the year, but those from the most northerly parts move more to

the south on the approach of winter, returning again in the spring. In the South of Scotland and upon the east coast of England their numbers are stated to be greatest in winter.

Habitat.—This Bunting is found in all parts of Britain. In the Shetland Islands it is rare, but commoner in the Orkneys and outer Hebrides. On the mainland, in England and in Ireland it is found in almost every suitable locality. It frequents fens and marshy places on the sides of rivers that are overgrown with reeds.

ABROAD it is found in all suitable localities throughout Europe. It is also reported from Algeria, Turkestan, India and South Western Siberia.

Nest.—The nest is commenced early, often by the middle of March, and is placed among coarse grass, near a small bush or tuft of *Carex* or some object which will

afford a slight protection. It is generally placed very near, but not quite upon the ground, but occasionally at an elevation of several feet. The materials of which it is constructed is coarse grass, bents, seed stalks of *Cardamina pratense* and moss, lined with finer grass, hair, or the feathery tops of the reed. Mr. F. Kerry sent me one lined with black horse hair. The nest is a rather loose structure.

Eggs.—From four to five or sometimes six eggs are laid and there are generally two or three broods in a season. They are olive or grey, sometimes with a yellowish or rosy tint, spotted and streaked with purple-brown and black, with sunken grey shades. They somewhat resemble those of the Chaffinch, but the ground colour is darker, and the spots more decided.

VARIETIES.—Sometimes nearly pure white ones occur, and others dingy-white with a few dark spots and marks.



REED BUNTING.



YELLOWHAMMER.

68. YELLOWHAMMER.

Emberiza citrinella, Linn.

CITRINELLA.—Diminutive of *citrinus* [Lat.]—of a yellow colour.

Size.—Male length 7 in.; expanse 12 in.; female a little smaller.

Plumage.—Adult male in summer has the bill brown, bluish on the lower mandible. Eyes dark brown. Head bright yellow, streaked with olive on the forehead, over the eyes, behind the crown, and around the ear-coverts. A patch behind the head yellow. Back brown, each feather having a dark streak down the centre, shading to bright nut-shell-brown, and then to pale brownish-orange. Wing-coverts, secondaries, and tertials blackish, with broad margins of nut-shell-brown. Primaries blackish, with the outer edges having narrow margins of bright yellow. Upper tail-coverts bright nut-shell. Tail blackish, the two middle feathers with broad nut-shell edges, the rest with narrow yellow edges, and the two outside pairs having most of the inner web white. Throat, as far as the breast, and sides of the neck bright yellow. Under parts yellow, shaded across the breast and at the sides with nut-shell-brown. Legs and toes light brown.

IN WINTER the yellow parts are much obscured by the olive edges of the feathers.

THE FEMALE is much less bright in colour, most of the yellow being replaced by dusky-olive, and a line of dark streaks extends from the base of the lower mandible.

IMMATURE BIRDS have little or no yellow until after the first moult. The back has less brown, being more of a dusky-olive, the lesser wing-coverts, tertials and the back feathers being tipped with yellowish-white.

The birds at all seasons vary greatly in the amount of yellow, very old males hav-

ing the whole of the head and neck canary yellow.

VARIETIES.—Considering the abundance of this species, varieties cannot be said to be very common. A buff specimen is in the Preston Museum, and another canary yellow with a few dark feathers about the head and wings. Two "canary yellow" are recorded (Nat. 1865, p. 251) as having been killed on the Isle of Gomatra, about six miles to the north of Staffa, and Mr. Bond has also one of this variety shot in Cambridgeshire (Fig. 3). Another bright yellow specimen is recorded (Zool. Feb. 1877) by Mr. Gatcombe, as having been killed on Dartmoor. One is reported (Nat. 1864 p. 147), having the back and wings light reddish brown; throat, breast, and belly of a pale sulphur-colour, killed near Norwich. Of pale coloured specimens but showing the usual markings, Mr. Whitaker has two having a washed-out appearance, one of them killed at Rainworth Lodge (Fig. 2). Mr. Bond has specimens with the colours more or less subdued, killed at Hackney, Woolwich, and in Devon. Of pied specimens Mr. Marshall has one; Mr. Bond has one killed in Scotland with the pinions mostly white, and another, killed at Farnham, with the primaries, part of secondaries, and one or two tail-feathers white. Mr. Whitaker has a Scotch specimen with the base of the pinions white, and another (Fig. 4), killed in Notts, almost entirely white. Montague mentions one having the whole of the head, breast, and lower parts of the back pale yellow, and the quill-feathers and shoulders white. A white one is reported (Nat. 1864 p. 147) as having been killed near Norwich. Dark specimens are rare, but Mr. Bond has a Scotch bird, showing a decided tendency

to melanism. Mr. Gurney has a chocolate-coloured specimen; if this be the same as the one reported in the *Naturalist* (1864, p. 147) it was kept in confinement, but it is not stated whether or not it assumed the dark colour in such a state.

Note.—The song of the Yellowhammer consists only of a few notes, but nevertheless is very sweet, and uttered at very short intervals as the bird sits upon a bush or tree or frequently upon a wall. It is commenced very early in the year, in mild weather by the end of January and carried on almost unceasingly until very late in the autumn. It resembles the syllables "tee, tee, tee; see tee" the first three uttered in quick succession, and the last two drawn out. In Scotland the people imagine the bird is specially addressing nest-robbers, and likens the few notes to the words "Deil deil deil, tak ye." Other curious renderings have been given in various parts of England, such as "Lig lig lig, and sleep," "Little bit o' bread and no cheese."

Flight.—The flight is rather quick and undulating, and when the bird alights it drops quickly upon some hedge or bush as if in obedience to some sudden impulse, furling the tail and wings at the same time.

Migration.—The Yellowhammer is found in Britain at all times of the year, but as with many other species large numbers arrive upon the east coast on the approach of winter.

Food.—During the breeding season insects and their larvæ constitutes the entire food of the young, and the chief part of that of the adult birds, but after the breeding time both old and young resort to the open fields and feed upon small seeds especially those of weeds which are found in stubbles. In winter they associate with other small birds and may then be found in stubble-fields, stack-yards and similar places, and although during severe weather they will eat grain, the seeds of smaller plants are preferred as long as they can be obtain-

ed, the bird in this way rendering great service so the farmer by destroying the noxious weeds.

IN CONFINEMENT.—See Bunting.

Habitat.—This is a common bird in almost all parts of Britain, the only places where this remark does not apply being the Outer Hebrides, and the Orkney and Shetland Islands, in which latter place it has not been known to breed. It frequents hedges in cultivated parts and rough places overgrown with bushes.

ABROAD it is met with in summer in Norway, Sweden, Finland, North Germany, the northern parts of France, Russia, Western Siberia, and some parts of the Alps, and is generally common. In winter it occurs from North Russia to the shores of the Mediterranean, but rare south of the Pyrenees.

Nest.—The nest is commenced in April and is placed in a low bush or among loose sticks, very near, and sometimes entirely upon the ground. I have sometimes found the eggs laid in what seemed to be little more than a hollow depression in the ground. It is generally constructed of somewhat coarse stems and blades of dry grass, lined with finer ones and a few horsehairs. In the "Life of a Scotch Naturalist" a case is recorded in which a Yellowhammer built its nest in a cart rut, but it was destroyed by a cart wheel passing over it.

Eggs.—From four to five eggs are laid, and there is a succession of broods up to the middle of September. The ground-colour of the egg is grey beautifully lined with purple-black, or frequently with reddish-brown. Sometimes the egg is clouded with pale purplish-brown, and at others the markings are concentrated upon the large end, or upon the small end.

VARIETIES.—Mr. Whitaker has a small specimen, figured upon the plate. Occasionally white or cream-coloured ones occur.



YELLOWHAMMER



GIRL BUNTING

69. CIRL BUNTING.

Emberiza cirrus, Linn.

CIRLUS—?

Size.—Length, $6\frac{1}{2}$ in., expanse, 10 in.

Plumage.—The male in summer plumage has the bill bluish lead-colour; eyes hazel; top of head, and neck dark olive, the former streaked with black; a dark stripe runs through the eye, and a bright lemon one above and below; back bright chestnut-brown, some of the feathers having a dark stripe down the centre; lesser wing-covert dusky, with lighter points; greater wing-coverts, and tertials, blackish with chestnut edges; primaries blackish with narrow yellow edges; upper tail-coverts pale olive; tail blackish, middle feathers tinted with olive-red; two outside pairs being partly white on the inner web. On the throat is a triangular black patch, with a bright lemon crescent-shaped patch below it; across the breast is a broad olive band, which joins the same colour behind the head; below this is a chestnut band, broad at each side and narrow in the middle; under parts dull lemon streaked with olive at the sides (fig. 1).

IN WINTER the colours are less bright, and the black feathers of the throat margined with light colour.

THE FEMALE is without the black patch on the throat, and the yellow crescent below it. The head, back, and under parts are also streaked with black (fig. 2).

“Many people find a difficulty in distinguishing the female of this bird from that of the Yellowhammer. In the Yellowhammer the base of the feathers of the crown of the head are always yellow, in this bird they never are; the feathers being

olive-green, more or less striped with black. The rump feathers are not chestnut-coloured, like those in the Yellowhammer.”—F. B.

IMMATURE BIRDS are similar to the females, but are entirely without yellow on any part.

VARIETIES.—The only variety I have seen, is one figured upon the plate, from Mr. Bond's collection.

Note.—The song of this bird is said to resemble that of the Yellowhammer, but is quicker, and cut short at the end. The male sits on the top of some tall tree, and pours forth his song. That of the female is simply a call-note.

Flight.—Similar to that of the Yellowhammer.

Migration.—This species is resident in England throughout the year.

Food.—The food of this bird is similar to that of the Yellowhammer, consisting of seeds, berries, grain, and insects. The young, it is said, are fed principally upon grasshoppers.

IN CONFINEMENT, young birds have been reared successfully on a paste made of the berries of the woody nightshade (*Solanum dulcamara*), wheat flour, and fine gravel.

Habitat.—The Cirle Bunting was only distinguished as a British bird in 1800, by Col. Montague. Since then it has been found to inhabit nearly all the southern counties of England, and to breed in many of them. It is, however, a local bird, and nowhere numerous. Stray individuals, most

frequently in winter, have found their way into the midland counties, less often to Yorkshire, and one has been met with as far north as Banff.

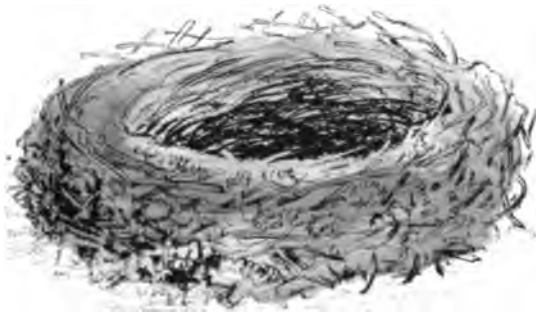
ABROAD it is met with in the South of Europe. In Holland, Belgium, and Heligoland it is only a rare visitor. It is more or less common in the South of France, Spain, Portugal, the Crimea, and Algeria.

Nest.—The nest is placed in a bush, just above the ground, or sometimes on the ground itself, in a sloping bank. It is composed of dried stems of grass and moss,

lined with bents and hair. The one figured was taken in Sussex.

Eggs.—Four or five is the usual number. They resemble those of the Yellowhammer, but are rounder, and have the markings usually more defined, there not being so many continuous fine lines, they being mostly short, and ending in a dot. The markings are black, and seldom shaded so much with brown as in those of the Yellowhammer.

VARIETIES occasionally occur without any markings





CHAFFINCH

FRINGILLIDÆ.

Genus 1. *Fringilla*, LINN.

FRINGILLA—Latin for Finch.

Twelve species of this genus are found in this country, most of them common, but one of them is only a winter visitor. Three more have been met with as accidental visitors. Most of them exhibit very bright

colours.

They feed upon seeds, grain, and insects.

The nests are usually compactly built, and the eggs are white or blue, with grey or brown spots and lines.

70. CHAFFINCH.

Fringilla cœlebs, Linn.

CŒLEBS (Lat.)=a bachelor.

Size.—Length $6\frac{1}{2}$ in., expanse $11\frac{1}{2}$ in.

Plumage.—The adult male in breeding dress has the bill bluish lead-colour; eyes hazel; next to the bill is a black patch; head on top, behind, and back of neck slaty-blue; below this is a patch of yellowish olive; back chestnut-brown; rump and upper tail-coverts yellowish-green; lesser wing-coverts white; greater wing-coverts blackish with white tips; primaries blackish with narrow pale edges, and a white patch on the outer web of the inner feathers; tertials with broad yellowish margins; tail dull black, the two middle feathers greyish, the outer ones with narrow white outer margins, a patch of white on the inner web, and the two outside feathers nearly all white. Throat and breast purplish-rose colour shading to white at the vent. Legs and toes brown.

IN WINTER the whole of the colours are less bright, the white being tinged with yellow, and the blue parts obscured by the brown margins of the feathers.

THE FEMALE has the upper parts greenish-brown, with a pale spot behind the head. The green on the rump is not so

bright as in the male. Throat and breast dull fawn-colour, under parts dull white, shaded with greyish-brown at the sides.

IMMATURE BIRDS resemble the females, but are less bright in colour.

VARIETIES of this species are comparatively common, and I have obtained figures of so many beautiful specimens that I have been obliged to rather unduly crowd the plate.

WHITE OR PALE.—Some years ago my father had a white specimen brought to stuff, killed near Huddersfield. Two white specimens are in Mr. Marshall's collection at Taunton. One is in the York Museum which is white just tinted with local colours. One is reported (Zool. xix, 7392) with the "Head and back white with the most delicate yellow tints over certain parts, and a few brown feathers on wings and tail: throat, breast, and under parts white tinted with rose," killed in Norfolk. Mr. Bond has one of a lemon-colour, and another pale drab, killed at Faversham (fig. 9), and a similar one killed in Sussex. Mr. Whitaker has a pale female (fig. 8), and a male (fig. 7) with all the colours very much subdued. Another very pretty male (fig. 6) is also in the same collection.

PIED.—Fig. 5 represents a female in Mr. Whitaker's collection and he has another ♀ with the back of the neck white, head, wings, and tail, much pied, killed in Suffolk. Fig. 4 represents a male in Mr. Bond's collection killed at Weybridge, and he has also a male with white ear-coverts, and a female with a white head. Fig. 3 represents a beautiful male in Mr. Gregson's collection.

DARK.—The only specimen I have seen darker than usual is one in Mr. Bond's collection (fig. 10), killed near Hammer-smith. The same gentleman has also a male, which was kept for some time, in the Zoological Society's Gardens, which had, when living, a bright yellow patch behind the head.

Note.—The male bird has a merry and pleasant song, which is commenced early in the year. Both sexes have also a call-note resembling the syllables "pink, pink," from which the local name of "Pink" or "Spink" has been derived.

Flight.—The flight is rather quick and undulating. This species has also the habit, in common with other small birds, of darting into the air after a passing insect.

Migration.—The Chaffinch may be found in this country throughout the year, but in the autumn large flocks, composed principally of females and young birds, arrive upon the east coast. These probably come from the North of Europe, and depart again the following spring. In many districts the sexes seem to separate in winter—hence the specific name,—and flocks may be noticed composed almost entirely of one sex.

Food.—In winter the Chaffinch subsists largely upon small seeds, for which purpose they visit farm steads, stack yards, and stubble fields. In spring they resort to the newly sown seed beds and pick up the uncovered seeds, especially those of

turnip. They are also fond of young tender plants, and nip them off as soon as they show above ground. In summer, when the young are being fed, insects are used for that purpose.

IN CONFINEMENT the Chaffinch is a merry bird, is easily kept in a cage or aviary, and will eat small seeds of almost any kind.

Habitat.—This is a common bird in all parts of Britain, and breeds everywhere except in the extreme northern and western Islands of Scotland.

ABROAD it is common in most parts of Europe, into the Arctic Circle. It breeds in all the Middle Countries, North Russia, and Siberia. It is a winter visitor to Palestine, Egypt, and North Africa, but is rare south of the Mediterranean.

Nest.—The nest of this species is one of the most beautiful of any of our British birds. It is placed in the fork of a tree, against a tree side among small branches, in a fruit tree, or in a hedge row. It is round, compact, and composed of bits of dry grass, shreds of the inner bark of trees and moss. Cobwebs are also largely used in its construction, and bits of lichen are stuck upon them on the outside. Inside it is lined with horsehair. It is rather deep and very well put together.

Eggs.—Five is the usual number. They are greenish-blue shaded and dappled with reddish-brown, and purple spots and blotches. Sometimes the markings entirely covers the ground colour.

VARIETIES.—There is a variety not unfrequently met with of an uniform pale greenish-blue (fig. 2). When this variety occurs, the whole of the eggs in the nest are generally of the same colour. Figs. 3 and 4 represent two specimens in Mr. Whitaker's collection and were, I believe, taken by his son—Joseph R. Whitaker, in the grounds at Rainworth Lodge. The blue variety is also in the same collection

L X X



1



2



4



3



CHAFFINCH



BRAMBLING.

71. BRAMBLING.

Fringilla montifringilla, Linn.

Berg-funk (Sweden).

Vintan (Lapland).

MONTIFRINGILLA.—*Mons* (L.)=mountain, *fringilla*=a Finch.

Size.—Length $6\frac{1}{4}$ in.; expanse 10 in.

Plumage.—Male in summer, bill bluish-black; eyes brown; head, sides of neck, and back, black; scalpulars orange; lesser wing-coverts orange, the lower row white; greater wing-coverts black, tipped with orange and white; primaries black, edged with lemon, a white patch on inner web; secondaries black, bordered with orange; rump white; upper tail-coverts black; tail black, middle feathers edged with grey, the two outer ones white on the outer web at the base. Throat and breast buff; belly white, spotted with black at the sides; under wing-coverts lemon-yellow; under tail-coverts yellowish-white. Legs and toes brown (fig. 1).

IN WINTER the colours are less bright and the black of the head and back is obscured by broad yellowish margins to the feathers, and the bill is bright yellow except the tip (fig. 2).

THE FEMALE has the bill horn-colour, the feathers on the head and back dark brown, with broad pale margins, which almost hide the dark colour. The wings and tail are more dingy in colour than in the male. Under parts similar to male but not so bright.

THE YOUNG are similar to the female, but paler and duller in colour.

VARIETIES.—Some specimens have the throat black, and one is figured (fig. 3) upon the plate from Mr. Bond's collection; Mr.

Gurney, I believe, has a similar specimen. Fig 4 represents a beautiful specimen from Mr. Bond's collection, being white except a few feathers in the wings.

Note.—The note consists of one syllable, resembling "cree, cree."

Flight.—The flight resembles that of the Chaffinch, but this species may always be distinguished by the white rump.

Migration.—This bird is a winter visitor to this country, arriving about the middle of October, and departing again early in March.

Food.—This consists of seeds of various kinds, both stubble-seeds and those of larger kinds, including those of the beech, of which this bird is said to be particularly fond.

IN CONFINEMENT the ordinary bird seed, in common use may be given. The Brambling has been known to breed in confinement.

Habitat.—This bird is found in winter principally in the eastern counties where it frequents farm steads. Some seasons the numbers are only small, but at other times they come in vast flocks. Sometimes they associate with Yellowhammers and Chaffinches.

ABROAD this is one of the commonest birds in the North of Europe in summer, and in winter is found as far south as Algeria. In Asia it has been met with on the Himalayas, and as far east as China.

Nest.—The Brambling breeds in Norway and Lapland, building a nest very similar to that of the Chaffinch. It is usually placed in a small fir, from six to ten feet from the ground, and is composed of fine straw and bents, mixed with moss lichen, and pieces of wasp's nests, and lined with fine bents, and feathers of the Willow Grouse. Instances are recorded of this bird having bred in Britain, but there seems to be no substantial proof, that such is the case.

Eggs.—From four to six eggs is the usual number, though sometimes as many as seven have been found in one nest. Mr. Wheelwright says "The eggs are very like those of the Chaffinch, but generally a trifle smaller, darker in the ground colour, and the purple lines and dots more coloured." ("Spring and Summer in Lapland," p. 228).

VARIETIES—The lower figure represents one laid by a bird in Mr. Gregson's aviary. Mr. Bond informs me that he has seen eggs similar to the pale blue eggs of the Chaffinch.

LXXI



BRAMBLING.



TREE SPARROW.

72. TREE SPARROW.

Pringilla montanus, Linn.

MONTANUS.—*Mons* (L.)=a mountain.

Size.—Length $5\frac{1}{4}$ in.; expanse 9 in.

Plumage.—The male has the bill blackish; eyes hazle; top and back of head red-brown; back reddish umber-brown, streaked with black in the centre of the feathers; wings blackish-brown, with red-brown margins to the feathers; greater and lesser wing-coverts tipped with yellowish white; rump and tail umber-brown. Under parts dingy white, a black patch on the throat which extends round the eye, and another on the ear-coverts surrounded with dingy white.

THE FEMALE resembles the male, but is rather less, and the colours not quite so bright.

IMMATURE BIRDS have the top of the head dull orange brown.

VARIETIES.—The only variety I have seen is depicted upon the plate from a specimen in Mr. Whitaker's collection, killed at Woolwich, but that gentleman informs me that one is in the Nottingham Museum which has all the colours obscured as if seen through a fog. Mr. Bond also informs me that one nearly white is in the Cambridge Museum.

Note.—The note of this species is somewhat like that of the Common bird, but shriller, and more variable, and is sometimes prolonged into a chattering song.

Flight.—The flight and general manners much resemble those of the House Sparrow.

Migration.—A resident in Britain throughout the year, but in common with other small birds, it flocks in winter, visiting farm steads, and stubble fields, and in the

autumn a large proportion visit the east coast from the continent.

Food.—During the greater part of the year, seeds of various kinds form the principal food of this species. The young are fed upon insects and soft food.

IN CONFINEMENT they may be fed upon hemp, rape, millet, and canary seed.

Habitat.—This bird is scattered widely over the British Isles, but is nowhere abundant. In some places it is fairly common, but local, as, for instance, near Wakefield. It is most numerous along the east coast of England and Scotland, rare in the West, still rarer in Ireland, and absent from Orkney and Shetland.

ABROAD it is found commonly in the Færoes and throughout North Europe, rarer in the South, and only an occasional visitor south of the Mediterranean. Its range in Asia extends across the continent from Russia to Japan, and it has also been met with in Java, and some other of the Asiatic Islands. It has also been introduced into America.

Nest.—The nest, like that of the Common bird, is composed of hay, very loosely put together, and lined with feathers. It is placed in a hollow tree, or in a hole in a wall. Occasionally this bird will build under eaves, but generally it is not found near to human habitations.

Eggs.—The eggs are less than those of the common Sparrow, usually more blotched with brown, and more blunt at the small end.

VARIETIES.—The eggs of this species, like those of the House Sparrow, run through various degrees of markings.

LXXII.



TREE SPARROW.



HOUSE SPARROW.

73. HOUSE SPARROW.

Fringilla domestica, Linn.

DOMESTICA=pertaining to the habitations of man.

Size.—Length $6\frac{1}{4}$ in.; expanse $9\frac{1}{2}$ in.

Plumage.—Male in summer bill dark lead-colour; eyes hazel; top of head dark ashy-grey, behind which, is a chestnut band narrow in the middle and reaching to the eyes; following this is another greyish band; back greyish-brown, each feather darker in the centre; lesser wing-coverts chestnut-brown, the outer row tipped with white, forming a bar across the wing; greater wing-coverts blackish-brown edged with dull orange; flight-feathers blackish; rump olive brown; tail blackish. Chin and throat a black patch, which extends around the eyes and over the bill; sides of neck dull white, shading into grey and brownish on the breast and flanks; legs and toes brown (fig. 1).

IN WINTER the colours on the head and back are obscured by the broad grey edges of the feathers.

THE FEMALE is without the black patch on the throat; the head and neck are pale brown, with a light streak from each eye (fig. 2).

VARIETIES are not uncommon. White—Purely white birds are not unfrequent. One is in Dr. Mason's collection, taken from a nest near Huddersfield. Mr. Bond has also white specimens. A pure white bird was shot at Hetherst in December 1863, and a second at East Tudenham, both with pink eyes, (NAT. 1864, p. 147). Mr. Marshall has two white ones in his collection.

PALE.—Mr. Whitaker has several drab ones, a pale one killed in Nottinghamshire, and another darker drab killed near Hull,

the latter he has very kindly presented to my collection. One of his specimens, killed near Mansfield, is silver-grey tinted with brown on the top of the head. Another, killed in Cambridgeshire, has the pinions and greater wing-coverts white at the base, and coloured at the tips, the other parts being mealy. Another, shot near Woolwich, is white, tinted with red behind the head, and on the back. His Nottinghamshire specimens include one silver-grey; a female with all the colours subdued, and presenting a mottled pale brown appearance (fig. 3); another similar one but paler, and one dull grey. Mr. Bond has one silver-grey; one silver-white, with the markings rust-colour, the latter killed on Hackney Marshes; one reddish-drab killed in Cambridgeshire. One of a cream-colour, and the markings in bright brown and light grey, is recorded (SCI. GOS. 1869, p. 22). A buff-coloured one is recorded from near Norwich (NAT. 1863, p. 147), and a second, noted in the same paragraph, having "the upper parts of its plumage of a rich cream-colour, marked with a few faint bars of a reddish hue, the under surface of a pale cream-colour, approaching to white." Mr. Rowley has one with the chin chestnut.

PIED.—Specimens of the ordinary colour but more or less marked with white are most frequently met with. Mr. Whitaker has a female which has the top of the head, part of wing-coverts, tail-coverts, and part of tail white, killed in Notts; another pied male (fig. 4), and a second male with flight feathers and tips of three or four tail feathers white, Notts. A female with head, most of back, rump, tail-coverts, one tail feather, wing-coverts, and 1 or 2 secondaries white,

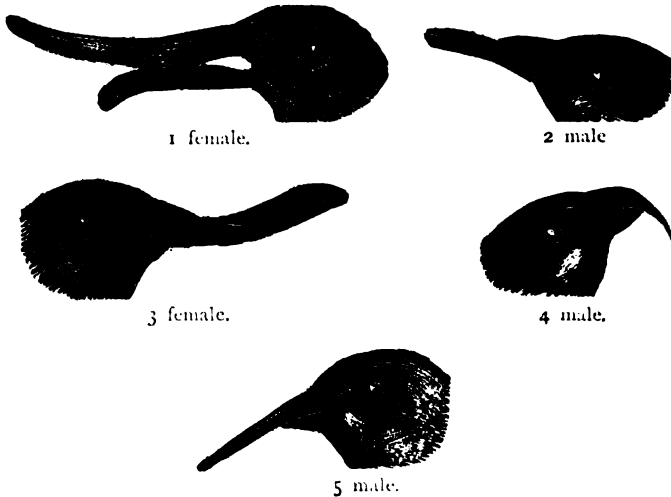
Notts; a male freckled all over with white, Sussex; and a male with pinions, tail-coverts, and tail white, Notts. Another male is white on the top of the head, the back, part of wing-coverts and secondaries, and central tail feather, and mottled on under parts, Notts. Mr. Bond has also pied varieties, and one in the Preston Museum has the pinions all white except the two first. One white, with a few coloured feathers in the wings and tail, is noticed (NAT. 1863, p. 171) as having been seen near Belfast. Pied birds are noticed in the pages of all the zoological magazines. Mr. H. Andrews sent me a very pretty

pied bird, killed near Borough Bridge in 1881, and I have killed or noticed others in the neighbourhood of Huddersfield.

MELANIC.—Dark specimens are rare. Fig. 5 represents one from Mr. Whitaker's collection, and Mr. Bond has another of the same colour. Selby says he has seen specimens of an unvarying blackish-brown.

Several curious deformed bills are given: figs. 1, 2, 3, and 4, are from Mr. Bond's collection, fig. 5, from Mr. Whitaker's.

Note.—The "chip, chip" of the Sparrow is too well known to need any comment. Sometimes it has a low, but sweetish song.



Flight.—The flight for short distances is in a straight line, and performed in a fluttering manner; in longer distances it becomes undulating.

Migration.—Resident through the year.

Food.—Up to recent years most naturalists have looked upon the Sparrow as the farmer's friend, and drawn special attention to the large number of caterpillars

destroyed during the breeding season. There can be little doubt that numbers are destroyed in this way, but like most other good things, it is possible to have too much. Anything protected to increase beyond its due proportion becomes more or less a nuisance, and there can be no doubt that Sparrows and other small birds have greatly increased since the passing of the "Wild Birds' Protection Act." As a





GREENFINCH

consequence, grain and seed crops have suffered greatly, insects have enormously decreased, and those birds which feed either entirely or partly on grain, have been driven back to that resource. In Miss Ormerod's last Report (1884), is much valuable information relative to Sparrows' food from which I gather that Col. Russel, who has paid great attention to the matter, is of opinion that 95 per cent, of the Sparrow's food is corn. The effect of this undue increase, for which some of the bird men of this country are responsible, is, that now the cornfields are ravaged, and the man who has toiled to provide supplies for his family through the winter, has his crops destroyed and laid waste by Sparrows, and other small birds, and the outcome is, that "Sparrow Clubs" are again instituted.

IN CONFINEMENT the Sparrow will eat almost anything, but it has no attractions as a cage-bird.

Habitat.—The Sparrow is generally found near the dwellings of man, and is abundant in almost all parts of the British Isles, except some of the outer Scotch Islands, and the high mountains.

ABROAD it is found more or less throughout Europe, even as far north as Finland. In Siberia it is found following the inroads of man, as far as north latitude 61, also in India, Ceylon, Beloochistan, Persia, Egypt and the Maderias. It was introduced into America in 1858, as a destroyer of noxious insects; nest boxes were put up, which were rapidly taken possession of, and the Sparrows have so much increased, as to outnumber all the native birds collectively. Now it is a great pest. It has also been introduced into

Australia, and some of the Asiatic Islands.

Nest.—The nest is constructed of hay or straw very loosely put together, an irregular mass, sometimes enough to fill a coal scuttle; it has a hole at the side, and lined with feathers. Not unfrequently old rags, paper, twine, or any soft substance is used. It is placed most frequently on the top of a drop-spout, under tiles, in the hole of a wall, or in a tree, either between a fork, or against the bole among small branches,

Eggs.—Five to six, and sometimes seven eggs are laid, and there are several broods in a season. They are greyish- or greenish-white, more or less spotted with bluish-grey, and ashy-brown. They vary considerably in the extent of markings, usually being some modification of figs. 1 or 6.

VARIETIES.—It would be difficult to imagine an egg to vary more than this by the use of so few colours, and I am greatly indebted to J. Whitaker, F.Z.S., for having permitted me to look through an extensive series, taken about Rainworth Lodge during the present year (1885) by his son—Joseph R. Whitaker. Figs. 1 to 7, are selections from this series. There were many like fig. 4, with the ground colour quite green, all of which had the markings pale and indistinct. Fig. 1 is from a specimen in Mr. Gregson's collection, and I have another almost exactly like it. Purely white eggs sometimes occur, and I have one in my collection, and have seen others, pale like the upper figure on the greenfinch plate. Occasionally the markings are deep red as in fig. 2.

74. GREENFINCH.

Fringilla chloris, Linn.

CHLORIS.—*chloros* (Gk.)=green.

Size.—Length, a little over 6 in.: expanse $10\frac{1}{4}$ in.

Plumage.—Adult male, bill dull flesh-

colour, darkest at the tip; eyes hazel. The upper parts are yellowish olive-green, bright yellow-green on the rump; wings olive-brown, broadly bordered on the tertials

with pale brown, narrowly on the secondaries with greenish, and on the primaries, especially towards the base outwardly with bright lemon yellow; tail blackish, the two middle feathers bordered with grey, the rest with the basal half lemon yellow. Under parts more yellow shaded with grey about the cheeks, and passing to whitish at the vent. Legs and toes pale brown (fig. 1).

THE FEMALE differs from the male in being much less yellow, being more of an olive-brown, and the yellow on the wings and tail is less bright.

IMMATURE BIRDS have scarcely any green or yellow at all, and immature males are very similar to old females.

VARIETIES.—There is a specimen in a collection at Huddersfield which is entirely of a pale drab. Mr. Whitaker has one white, killed in Norfolk, and one cream-colour, killed near Mansfield. He has also one with the colours very pale from Suffolk (fig. 3), and two pied—one, a female (fig. 4) from Derbyshire, and another (fig. 2) killed in Notts. One in the York Museum, is nearly white, and Mr. Marshall has a pied one in his collection. A variety is recorded in Grey's "Birds of the West of Scotland," "of a bright yellow, with the exception of the quill-feathers, which are pure white, killed near Kilmarnock." "A pale green variety" is recorded (Nat. 1864 p. 147) as having been killed near Norwich in the winter of 1860. Mr. Bond has one white, tinted with lemon on the rump and wings, and another pale one (fig. 5) killed near Harrow, Middlesex.

HYBRIDS sometimes occur between this and other species. Mr. Bond has hybrids between Greenfinch and Goldfinch, and between Greenfinch and Linnet. Mr. Whitaker has a hybrid between Greenfinch and Linnet (see pl. 78 fig. 6) killed in Cambridgeshire. All these, I believe, are crosses between wild birds.

Note.—The ordinary note is a kind of loud trill, generally uttered from the top of

a tree, or sometimes when on the wing. During the breeding season, the male bird makes some attempt at a song, but it is not very melodious, and composed of but few notes.

Flight.—The flight is very undulating, and rather quick. In spring the male has a very flappy butterfly-like flight, which is performed for short distances, at the same time uttering a kind of note similar to that produced by a pea-whistle.

Migration.—Many of the birds are resident in this country throughout the year, but in autumn large quantities arrive in the Eastern Counties, most of which, probably, come from abroad. In winter the young and old associate together, and visit stubble fields and stack-yards.

Food.—Seeds of various kinds, and vegetable matter, such as leaves of young turnips and other garden crops; even the young are stated to be fed entirely on soft seeds. During spring these birds do considerable damage to newly sown seed-beds, and when once they find out where the seed is it becomes very difficult to keep them away as long as any remains.

IN CONFINEMENT it will live upon any of the seeds in common use for birds, with occasional green leaves and heads of plantain, groudssel, &c. Sometimes they become very tame, and acquire the notes of other birds.

Habitat.—Common in most parts of Britain, the only places where it is at all scarce being the Outer Hebrides, Orkney and Shetland, where it is only a winter visitor.

ABROAD it is found more or less throughout Europe, breeding as far north as Finland, also in Russia, Western Siberia, Asia Minor, Greece, Algeria and Morocco. In the Faeroes, and in Palestine it is a winter visitor.

Nest.—Usually placed in a low bush, or in a hedgerow, at from 4 to 6 feet from the ground, and is not often begun before the end of April. The outside is composed



GREENFINCH



HAWFINCH

of fibrous roots, mixed with a little moss, or sometimes with wool; the lining being of finer roots, horse-hair and a few feathers, the whole rather loosely put together.

Eggs.—The number varies from 4 to 6. They are of a bluish-white, blotched and spotted with red-brown and ashy-grey,

principally at the large end; sometimes there are also a few blackish streaks, as in fig. 1.

VARIETIES.—They vary greatly in the depth of the spots; fig. 3. from Mr. Whitaker's collection is entirely without spots.

75. HAWFINCH.

Fringilla coccothraustes, Tem.

COCOOTHRAUSTES.—*Coccus* (Gk.) = a berry, *thrauo*=to break.

Size.—Length 7 in.; expanse $11\frac{1}{2}$ in.

Plumage.—Male in summer, bill bluish; eyes pale grey; top of head orange-brown, paler in front; ear-coverts rather more orange; around the back of the neck is a bluish-grey collar; back dark brown, orange-brown on the rump; lesser wing-coverts black; middle and greater wing-coverts white, shading to yellow-brown on the inner ones; secondaries and primaries black, with steel-blue outer webs, and the latter with a white patch on the inner web of each; the 6th to 10th primaries are formed like a hedging bill; tail, the two middle feathers orange-brown, white at the tips, the rest of the feathers black at the base and on the outer web, white at the tip and part of the inner web; vent and under tail-coverts pure white. On the throat is a distinct black patch, which extends round the eyes and over the bill; around the throat patch is a yellowish-white shade; underparts brownish-drab; legs and toes pale brown (fig. 1).

IN WINTER the colours are less bright, and the bill is pale horn-colour.

THE FEMALE has the patch on the throat less, and it does not extend so clearly round the bill and eyes; all the colours are less bright, and the orange-brown of the male is replaced by greenish-brown; greater wing-

coverts grey, and the outer webs of the primaries and secondaries blue-grey (fig. 2).

IMMATURE BIRDS have the bill flesh-colour, are without the throat-patch, and mottled on the under parts with brown (fig. 3).

VARIETIES.—The only varieties I have seen are two in Mr. Bond's collection. One (fig. 4) was killed near Harrow, and the other, all white except a few of the pinions and tail feathers which are the ordinary colour, was killed on Denmark Hill, near London.

Note.—The song is described as low and plaintive, but sweet, something similar to that of the Bullfinch, and that in mild weather it is continued through the winter.

Migration.—Like others of the genus the Hawfinch is partly migratory, and though found at all seasons, flocks may be seen during spring in places where it is seldom found at other times.

Food.—Mr. Henry Doubleday, who first noticed the habits of this bird in Britain, drew attention to the fact that the seeds of the hornbeam forms a large proportion of the bird's fare; it also eats haws, cherries, plums, seeds of maple, sycamore, common and Portugal laurels, &c. It commits great havoc among peas, of which it is particularly fond. Mr. Whitaker says "The Hawfinches did a great deal of damage to my peas again last year (1877), as they have

done for the last four years. I think from the number of young birds that there must have been two or three nests at Rainworth last year, but I could never succeed in finding them. It is a very shy bird, and if not carefully looked for will very seldom be noticed; anyone walking in the garden sends it away at once into the high trees, and it is only by hiding that you can get a good view of it. It gets at the peas by cutting the pods with its strong bill just as if done with a knife, taking out all the peas, and leaving the empty pod hanging on the plant. Its appetite for this vegetable is remarkable, and a dozen of these birds would soon clear a small garden if left undisturbed ('Birds of Nottinghamshire')."

IN CONFINEMENT it may be fed upon seeds, peas, beech-masts, haws, kernels of fruit, and berries of various kinds.

Habitat.—This bird frequents forests and wooded districts, especially when near gardens. Epping Forest seems to be the stronghold of the species, where it was first noticed by Mr. Doubleday. Since then it has increased greatly in numbers, and extended widely in its range, and has been met with in every English county, and occasionally in Scotland and Ireland.

It has also bred more or less in most of the English counties, and is also believed to have bred both in Scotland and Ireland but the fact is not thoroughly established.

ABROAD it is found more or less in most of the European countries, generally a resident, as far north as Finland and Rostoff in Russia. It is also found in the southern half of Siberia, as well as in China, Japan, Persia, Asia Minor, Palestine and North Africa.

Nest.—The nest is placed in a bush, often that of a hawthorn. It is constructed of twigs loosely laid, with a depression in the centre, lined with fine grass-blades. In a nest given me by Mr. Whitaker, and taken this season (1885) at Rainworth Lodge, the outside is composed entirely of twigs of the honeysuckle, and I believe the same material is generally used.

Eggs.—The number varies from 4 to 6, and are pale bluish-green, blotched and marked with odd bold splashes of sepia, occasionally with a few more distinct darker lines. The figure is from one of a clutch in a collection of eggs formed by Mrs. Whitaker upon the shooting grounds of Rainworth Lodge.



HAWFINCH





G O L D F I N C H

76. GOLDFINCH.

Fringilla carduelis, Linn.

CARDUELIS, from *Carduus*=the thistle.

Size.—Length 5 in.; expanse 9 in.

Plumage.—Male, bill pinkish-white, tipped with black; eyes hazel; face bright crimson, the colour extending all round the base of the bill to beyond the eyes; between bill and eyes black; top and back of head black, the colour extending in a band down each side of the neck; back yellowish-brown; wings black, with a broad yellow band across the greater coverts and base of primaries; primaries and tertials tipped with white; upper tail-coverts white; tail black, the middle feathers tipped with white, and the two outer ones have a large white patch on the inner web. Throat (below the crimson) dull white, which extends in a broad band over the ear-coverts to above the eyes; under parts dull white tinged with brown on the breast and sides; legs and toes flesh-colour (fig. 1).

THE FEMALE has the bill more slender, the crimson on the face is less bright, not so extensive, and often intermixed with black.

IMMATURE BIRDS have the whole of the upper parts greyish-brown, shaded with darker brown. The crimson on the face is absent, and only the outer tail feathers have a white spot. The black on the head and the crimson on the face begin to appear before winter.

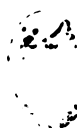
VARIETIES.—There is a recurrent variety called by bird-catchers the "Chevil" goldfinch in which the throat is white up to the base of the bill. A figure (fig. 2) of this variety is given from one in Mr. Bond's collection. In the same collection are two specimens pure white with the exception of the outer web of the pinions are yellow, and showing crimson round the face of the male

but not of the female. A white one is in Mr. Marshall's collection, and another is mentioned in 'Science Gossip' for January, 1862. Mr. Gurney has a pale coloured specimen, and Mr. Bond has one (fig. 3) with the back silver-grey, and another similar but the back darker, as well as several pied and a black one (fig. 4). An immature bird is recorded (Nat. 1864, p. 143) as having been killed near Helleston in November 1863 having the back pale buff, cheeks and under parts white, tinged with pale yellowish at the sides, crown of the head and wings of the usual colour. One is mentioned in the last edition of Yarrell with a red crescentic patch behind the black band on the side of the neck, and tinted with yellow on the breast.

HYBRIDS.—Mr. Bond has a hybrid between Goldfinch and Greenfinch, also two between Goldfinch and Linnet, one of them killed in Phoenix Park, Dublin. Mr. Whitaker has a hybrid between Goldfinch and Linnet (fig. 5). Another hybrid is between a Goldfinch and Bullfinch (fig. 6) which Mr. Gregson showed me alive in the possession of his son, it having been bred in captivity; this bird is somewhat larger than the ordinary Goldfinch. The Goldfinch also readily crosses with the Canary, and these hybrids are specially valued for their superior song.

Note.—The song of the Goldfinch is very sweet and beautiful, and on this account the bird is much prized as a cage-bird. It is commenced in March, and continued far into the summer.

Flight.—The flight is rather quick, the bird sailing off, when disturbed, to some distance, often in sweeps and curves. At other times they simply move to another batch of thistles, twittering as they take wing.



GOLDFINCH



SISKIN

77. SISKIN.

Fringilla spinus, Linn.

SPINUS.—From a Gk. word signifying "I chirp shrilly".—B. O. U. Cat.

Size.—Male, length about $4\frac{1}{4}$ in.; expanse 9 in. The female is rather smaller.

Plumage.—THE ADULT MALE IN SUMMER has the bill orange-brown; eyes brown; top of head black, a yellow streak over the eye, and a dusky one below it; back, nape, and lesser wing-coverts olive-brown streaked with darker; wings blackish with the tips of the greater wing-coverts, edges of the primaries narrowly, and of the tertials broadly bordered with yellow; all the wing-feathers are broadly yellow at the base; rump yellow; upper tail-coverts olive-brown; tail, the two centre feathers blackish, the rest yellow, and blackish at the tips, except the two outer ones, which have the outer webs black except at the base. Throat black; breast, sides of neck and ear-coverts yellow, shaded with greenish; under parts greenish-yellow, shaded with white at the vent, and streaked with olive-brown at the sides and flanks; legs and toes brown (fig. 1).

IN WINTER the bill is lead-colour, the yellow is less bright, and the black on the head and chin obscured by the brown edges of the feathers.

THE FEMALE is without the black on the crown and throat, has none of the bright yellow, and the whole streaked with olive-brown (fig. 2).

IMMATURE BIRDS are without yellow, except a little on the primaries and tail, the whole colour being brownish-buff, streaked with blackish, as in the female.

VARIETIES are rare, the only one I have seen is in Mr. Whitaker's collection (fig.

3). Mr. Gurney has, I believe, a yellow one in his collection. Selby says, "white and other varieties are frequently found."

Note.—The ordinary note, which the bird is incessantly uttering while searching for food, is a kind of twitter, but in spring the male begins a pleasant song which has been compared to the running-down of clockwork.

Flight.—The flight and general habits much resemble those of the tits, twittering and turning round the branches, particularly those of alder, tearing away at the catkins, and then flying off to the next tree. They work in bands, sometimes of considerable numbers, often associating with Redpoles.

Migration.—Flocks of this species visit this country in September, coming from the north, most of them departing again about April. These visits are, however, very uncertain, some seasons the birds come in thousands, while at others not one can be found. A few, more particularly in Scotland, remaining through the summer to breed.

Food.—The seeds of alder, birch, beech, and sometimes those of low plants.

IN CONFINEMENT the Siskin, or Abberdevine as bird-fanciers call it, is a lively and merry bird, especially in an aviary, where it has plenty of room. It crosses readily with the Canary, and hybrids are prized for their superior song. The Siskin may be fed upon any small seeds, and it readily breeds in captivity.

Habitat.—The flocks of this species are generally found where the alder or other trees abound which will furnish them

with food. One winter many years ago, vast flocks of these birds frequented some alder trees which grow along a watercourse near Huddersfield. It is a common visitor to the North of England, less frequent in Scotland (except in summer), and has been observed in Ireland.

ABROAD it is found throughout Europe. It is a summer bird in the north as far as Finland, and also in certain fir districts more south. It is found across North Asia, and as far as China and Japan. It has also been reported from Morocco and the Canary Islands.

Nest.—The nest resembles that of the

Goldfinch, and is placed in a fir tree, in thick brushwood, or even in a fern bush. The nest has been frequently found in Scotland, where the birds, no doubt, breed every year; it has also been met with in both England and Wales, as far south as Kent, and also in Ireland.

Eggs.—The eggs very much resemble those of the Goldfinch, but Prof. Newton says they may be distinguished, when two series of the eggs are placed side by side, by the ground-colour of those of the Siskin having a slightly bluer tint; they are also rather smaller. The number is usually four or five.

LXXVII



SISKIN

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See description p. 51
S.L.M.

L I N N E T

78. LINNET.

Fringilla cannabina, Linn.

CANNABINA, from *cannabis* (Lat.) = hemp.

Size.—Male length $5\frac{3}{4}$ in.; expanse $9\frac{3}{4}$ in. Female rather smaller.

Plumage.—THE MALE IN BREEDING DRESS has the bill bluish, yellowish at the base of the lower mandible; eyes hazle; top of head glossy red, the rest of head and neck greenish-grey; back and wing-coverts, as well as part of tertials, chestnut-brown; rest of wings blackish, the primaries narrowly edged, and the tertials tipped with paler colour; the outer web of primaries white at the base; upper tail-coverts grey; tail blackish, with narrow white stripes on the outer, and broad ones on the inner webs. Throat greyish-white, streaked with olive-brown; breast bright rosy, passing to dull white at the vent, and shaded with pale chestnut at the sides; legs and toes brown (fig 1).

Birds with the bright scarlet on the breast and head fully developed are not common, the males frequently having the rosy on the breast either absent, dull in colour, or mixed with brown feathers. Some naturalists, Mr. Hancock amongst the number, believe that the male bird assumes the red breast for the first season only, and afterwards assume and continue in the garb of the female. Judging from analogy this seems very improbable, and the theory is doubtless based upon observations on caged birds, which do lose the rosy tint when caged, and never again assume it in captivity. It is worthy of note, however, that in the North of England, cock birds may often be found breeding entirely without the red breast, while in the South, Mr. Bond informs me, the red is generally present in a greater or lesser degree, while

in Madeira it is stated, the birds retain it all the year round.

IN WINTER the bill is brown, horn-colour on the lower mandible; the red on the head and breast is entirely absent, but traces of it may be seen by blowing up the feathers, and the head and neck are darker. The feathers of the back are margined with lighter colour, while the throat and under parts are darker, streaked with brown on the breast.

THE FEMALE has the whole of the colours more uniform, the head being darker and the back duller than in the male; the red on the head and breast is not present, and the spotting extends to the bottom of the breast (fig. 2).

IMMATURE BIRDS resemble the female, but are more grey in colour.

VARIETIES are not unfrequent. Of pure white birds Mr. Bond has one, and a second with only a few feathers in the wings and tail ordinary, and a third reddish-buff. Mr. Marshall and Mr. Whitaker have each two pure white.

PIED ones are fairly common. Mr. Whitaker has one (fig. 4) killed in Bedfordshire, another white with a few dark spots on pinions and tail, killed in Yorkshire. Mr. Gurney has one pied bird. Mr. Bond has a pied one from Brighton, and another much suffused with grey on wings and tail. Figs. 3 and 5 are from a male and female in Mr. Gregson's collection. One with a white collar is recorded (Nat. 1864, p. 148). Sometimes the rosy breast is replaced with lemon-yellow.

MELANIC specimens are rare, the only one I have seen being in Mr. Whitaker's collection; it is black with brown edges to the wing feathers, and spotted with white

on the head and back, and is a Notts bird.

HYBRIDS.—Fig. 6 represents a hybrid between Linnet and Greenfinch, in Mr. Whitaker's collection, killed in Cambridge-shire. (See also Greenfinch and Goldfinch.)

Note.—The song of the Linnet is sweet and melodious, and on this account large quantities are caught and sold as cage-birds.

Flight.—Quick and undulating, the bird sometimes wheeling in circles before alighting, twittering during flight.

Migration.—Found in this country throughout the year, but partly migratory. Flocks may be seen at most seasons, especially in the autumn, when many pass over to the continent, returning the following spring.

Food.—All kinds of small seeds, especially those of flax, hemp, turnip, mustard, &c., and also berries and insects.

IN CONFINEMENT it will eat any of the seeds in common use. If caught in the autumn, or reared from the nest these birds soon become tame, and if taken young may be taught to whistle airs.

Habitat.—Almost equally distribut-

ed over the British Isles, except in the extreme north. It frequents commons and rough places where there is plenty of furze during the breeding season, and cultivated parts, stack-yards, &c. in the winter.

ABROAD it is met with commonly in all parts of Europe except the extreme north, generally a partial migrant. It is also recorded from Turkestan, Persia, Asia Minor, Palestine, Egypt, Algeria and the Canary and Maderia Islands.

Nest.—Most frequently in a furze-bush, or in a thorn, and is composed of moss, roots and wool, lined with hair and feathers. The figure is taken from a very pretty nest sent me by Mr. F. Kerry, from Harwich; it is lined with white horse-hair. Sometimes the nest is composed entirely of fibrous roots. It is begun in April, and there are two broods in a season.

Eggs.—From four to six; faint bluish-white, spotted and shaded, usually at the large end, with red-brown and blackish-purple. They vary much in the extent of the markings, some having a few black lines. They are smaller than those of the Greenfinch.

VARIETIES.—Eggs entirely without spots are by no means uncommon.

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REDPOLE

79. LESSER REDPOLE.

Fringilla rufescens, Vieil.

RUFESCENS.—*Rufa* (Lat.) red.

Size.—Male, length 4½ in.; expanse 8½ in. Female rather smaller.

Plumage.—THE ADULT MALE IN SUMMER has the bill dark horn-colour, the lower mandible yellowish at the base; eyes hazel; top of head bright glossy red; rest of head and upper parts dark brown, the feathers edged with greyish-white at the sides, giving a striped appearance; greater wing-coverts tipped with the same light colour, forming a band across the wing; wings and tail dark brown, the feathers narrowly edged with white; rump rosy-pink. Throat black; breast deep rosy-pink, shading to bluish-white on the under parts, and streaked with brown at the sides; legs and toes dark brown (fig. 1).

IN WINTER the pale margins of the feathers are broader, and the pink on the breast is less extensive.

THE FEMALE is paler than the male, and more streaked with brown on the under parts; the red on the crown of the head is less bright, and the pink on the breast and rump is entirely absent.

IMMATURE BIRDS have the feathers on the upper parts broadly margined with light colour, and those on the throat, breast and sides are tipped with brown.

THE NORTHERN RACE, known in this country as the MEALY REDPOLE (grasiska, Sweden; on oltsitsasch, Lapland) is, probably, nothing more than a race of this species. It differs in being about half an inch longer, and in having the light margins of the feathers much broader, giving the bird a mealy appearance. In habits, food, structure of the nest and colour of the eggs, it agrees with our bird, and there is

no more difference between the two than there is between the British and Scandinavian races of the Long-tailed Tit, or in the three forms of one of our British butterflies—*Lycana Akestis*. This is the true *Fringilla linaria* of Linnaeus, and from its wide geographical range should, perhaps, be considered the type (figs. 1 & 1, pls. 80-1 & lxxx-i).

THE ARCTIC RACE is found in still higher northern latitudes. This race is a little larger than the mealy bird, the pale margins of the feathers still broader and pure white, so that the whole bird, except the top of the head, is a beautiful mealy white. An example of this race is recorded by Mr. Hancock as having been knocked down with a clod of earth near Whitburn, on the 24th of April, 1855. Another is recorded ('Nat.' 1864, p. 148) as "a white variety of the Mealy Redpole, shot near Norwich in 1857."

VARIETIES are rare. Mr. Whitaker has a pair pure white killed in Notts; also a pied one (fig. 3) from the same county. The same gentleman has lately added a buff specimen to his collection, killed near Leicester by his brother—W. Whitaker, Esq. Mr. Bond has also one pure white, and another with a white patch on each cheek. Mr. Marshall has a pied one in his collection. Sometimes the red is replaced by yellow, as in the Linnet.

Note.—The call-note resembles the syllables "tweet, tweet," but in spring the male has a clear and pleasant song.

Flight.—Very light and graceful, much like that of the Siskin, which this bird greatly resembles in all its habits.

Migration.—Found all through the year in Scotland, Ireland and the North of England, but is more a winter visitor to the South. The northern birds move more south in the autumn, returning in the spring. Flocks of the Mealy Redpole visit this country every winter, more particularly the North and East of Scotland, but has been observed as far south as London.

Food.—Seeds of various kinds, both of low plants, thistles and those of alder and birch.

IN CONFINEMENT small seeds and seed-heads of dandelion, thistle, groundsel, &c. may be given.

Habitat.—The British race, or Lesser Redpole, as it is called here, is common in the northern portion of Britain, frequenting wooded districts.

ABROAD the Lesser race is confined to the extreme West of Europe, from Holland to the Pyrenees, and is not known to breed

out of Britain. The range of the Mealy or Northern race is, on the contrary, very extensive, being found across the northern of both the Old and New Worlds. The Arctic race is found within the Circle, being common in Greenland.

Nest.—Usually placed in a thorn, but sometimes against the side of a tree, among small twigs. It is composed of moss and blades of grass, lined with down off the catkins of willow, and sometimes hair or feathers. It is compact and deep. Mr. Wheelwright says the nest of the Mealy Redpole in the Lap woods, is one of the most beautiful objects, being made of fine sticks and lined with white down of the willow, or white feathers of the willow grouse.

Eggs.—Four to five is the usual sitting. They are bluish-green, spotted at the thick end with rust-colour and blackish.

VARIETIES without spots have been met with; one is given in my own collection.

LXXIX

8



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2

RED POLE



1 MEALY RED POLE

2-3 TWITE

80. TWITE.

Fringilla flavirostris, Linn.

FLAVIROSTRIS.—*Flavus* (Lt.) = yellow, *rostrum* = beak.

Size.—Length $5\frac{1}{4}$ in.; expanse nearly 9 in.

Plumage.—THE MALE IN SUMMER has the bill, pinkish-yellow; eyes hazel; all the upper parts, (except the rump, and including wings and tail dark brown, each feather bordered with ochreous, and the greater wing-coverts tipped with yellowish-white, forming a bar across the wing; rump pink. Throat ochreous; under parts dull white, streaked with brown on the breast and sides; legs and toes dark brown (fig. 2).

IN WINTER the pink on the rump is less bright, and the upper parts present a lighter appearance, owing to the light margins of the feathers.

THE FEMALE differs in wanting the pink rump.

IMMATURE BIRDS resemble the female, but the legs, feet, and the general plumage lighter.

VARIETIES are rare. Mr. Bond has one pure white, and when living had pink eyes; he has another (fig. 3) pied with white on the wings, killed near Brighton. Mr. Gurney has a light-coloured bird in his collection, and I have heard of a buff-coloured one killed near Huddersfield. A pair perfectly white, are recorded 'Zool.' p. 2953.

Note.—The call-note resembles the word "twite" whence the name of the species. The male has a song, almost equal to that of the Redpole.

Flight.—The flight is somewhat rapid and undulating, generally sweeping in curves before settling.

Migration.—Though found at all

seasons in the north, in autumn these birds flock, and many of them pass through the eastern counties and cross the Channel, returning again the following spring.

Food.—This consists of the seeds of wild plants, which it gathers either from the plants themselves, or from corn-ricks and stack-yards. It does considerable damage sometimes by nipping off the tops of young turnips and cabbages.

IN CONFINEMENT it may be treated like the Linnet, but it has not many attractions as a cage-bird, except for those who wish to study its habits in an aviary.

Habitat.—The Twite is abundant in the West of Scotland, both in the islands and on the mainland. It is not unfrequent in the North of England, common in some parts, and is also plentiful in Ireland. It is a moorland bird, and south of the Humber it is rare. In winter it may be found in stubbles and pastures in lowland districts.

ABROAD it summers in the northern parts of Europe, and is found as a migrant in autumn and winter in Germany, Holland, Belgium and Switzerland, and in severe winters even further south.

Nest.—The nest is placed among heather, at from a few inches to two feet from the ground. It is composed of dry grass and fine heather stems, lined with wool, hair, feathers or fibrous roots.

Eggs.—Four or five is the usual number, but sometimes six may be found in one nest. They are pale bluish-green spotted and streaked with red-brown and purple. They are paler, larger and generally more elongated than those of the Redpole.

VARIETIES.—My late friend, Mr. Jas. Varley, once took a nest near Huddersfield, containing six pure white eggs.

LXXX-1



2

1. NEARLY RED POLE

2. TWITE



BULLFINCH

Genus II. *Pyrrhula*, Brisson.

PYRRHULA, from *pyrrros* = red.

Only one species of this genus inhabits Britain; it differs from the other finches in the short thick bill, with the ridge of

the upper mandible curved to the tip.

The Scarlet Bullfinch has occurred as a visitor, and will be noticed in the accidental visitors.

81. BULLFINCH.

Pyrrhula vulgaris, Temm.

VULGARIS.—Common.

Size.—Male, length about $6\frac{1}{2}$ in.; expanse $9\frac{1}{4}$ in.; female rather smaller.

Plumage.—Male, bill black; eyes brown; head above the eyes black, extending in a band under the bill; back and lesser wing-coverts bluish-grey; rump white; upper tail-coverts, tail, and wings, glossy blue-black, except the tips of the greater wing-coverts, which are dull white; under parts pinkish red, white at the vent; legs lead-colour (fig. 1).

THE FEMALE has the back slaty-brown; breast and under parts brown or mouse-colour; the rest of the plumage as in the male (fig. 2).

IMMATURE BIRDS somewhat resemble the female, but have no black on the top of the head, the full plumage, however, being attained the first autumn, except that the bar on the wing and the under parts are tinged with ochreous.

VARIETIES.—Mr. Bond has one pure white, and another white with a clear pink breast, shot in Herts. Grey mentions a similar one as having been shown him by the late Thos. Edward of Banff. Mr. Bond has also one dingy white, with a rosy tint on the under parts, killed at Hampton Court, one pied (fig. 5) killed at Haslingfield, near Cambridge, another with a white side, and one of a singular drab, with head

and upper tail-coverts having bronze reflections, killed at Colnbrook, Bucks. 1865. Mr. Whitaker has a young bird (fig. 3), which, very curiously, is an albino without being pure white, having pink eyes when alive, and another (fig. 6) with wings and tail semi-diaphanous. Mr. Marshall has one white, and another pied, and one in the York Museum has a square white patch on the top of the head. One is reported (Nat. 1864 p. 148) with one side of the breast white, and the following year one being white, but with the back tinged with blue, and the breast with pink is recorded as having been shot at Totnes in 1851. One is recorded (Zool. 7429) as being black and white. Bullfinches frequently go black in confinement, and sometimes do so in a wild state. One is stated, in 'Science Gossip,' to have been black from the young state. A black one is figured from Mr. Bond's collection, and Mr. Whitaker has two very similar birds in his. Some years ago, a male was exhibited at a Crystal Palace Show, having the breast lemon-yellow instead of the usual red.

Note.—The song is sweet, rather varied, but uttered in a very low tone, during which the bird flirts its tail and wings; the call-note is very clear, and something of a whistle. The female sings, but her

song is inferior to that of the male.

Flight.—The flight is not often of long duration, generally along a hedgerow for a few yards, or from one tree to another; when for longer distances it becomes undulating.

Migration.—After the breeding season is over the young and old not unfrequently associate together, and wander from place to place, without any set line of movement, in search of food, but they do not leave this country.

Food.—The Bullfinch lives upon seeds, berries, and small fruits, and in summer, partly upon insects also. In spring, buds of fruit trees are eagerly sought out and nipped off by this bird, which, in this way, is sometimes very destructive.

IN CONFINEMENT it may be supplied with any of the bird-seeds, and if fed entirely upon hemp-seed, the whole plumage not unfrequently turns black. It is a lively cage-bird, and has often been taught to whistle airs, the natural song of the bird is, however, always the most pleasing to a true naturalist. It has been known to breed in an aviary, and occasionally crosses with other finches.

Habitat.—Found throughout the British Isles, except the Outer Hebrides; in Orkney and Shetland, however, it is only a rare visitor. It inhabits dense thickets in wooded districts, but in winter and spring, is not unfrequently seen in orchards and gardens.

ABROAD it is found commonly throughout the North of Europe and Siberia, as far as the Arctic Circle. In winter it has been met with as far south as Algeria and Asia Minor, and a few remain to breed in the northern parts of Spain, Italy, and the Caucasus. The eastern race has sometimes been described as distinct; it differs in being rather larger, in having the tips of the wing-coverts pure white, and slightly in other respects.

Nest.—The outside is composed of slender sticks, placed in a rather irregular manner, and forming a platform with a hollow cup at the top. This cup is liberally lined with fine roots, and sometimes a little wool, or a few feathers. The one figured upon the plate, and which was sent me by Mr. F. Kerry from Harwich, is composed on the outside of coarse roots, and lined with finer ones inside. It is mostly placed in a thick bush, as in that of an evergreen, but I have found it among the exposed tree roots on a bank. The birds probably pair for life as they may often be seen in pairs, even in mid winter. The nest is commenced in April, and eggs may often be found by the end of that month.

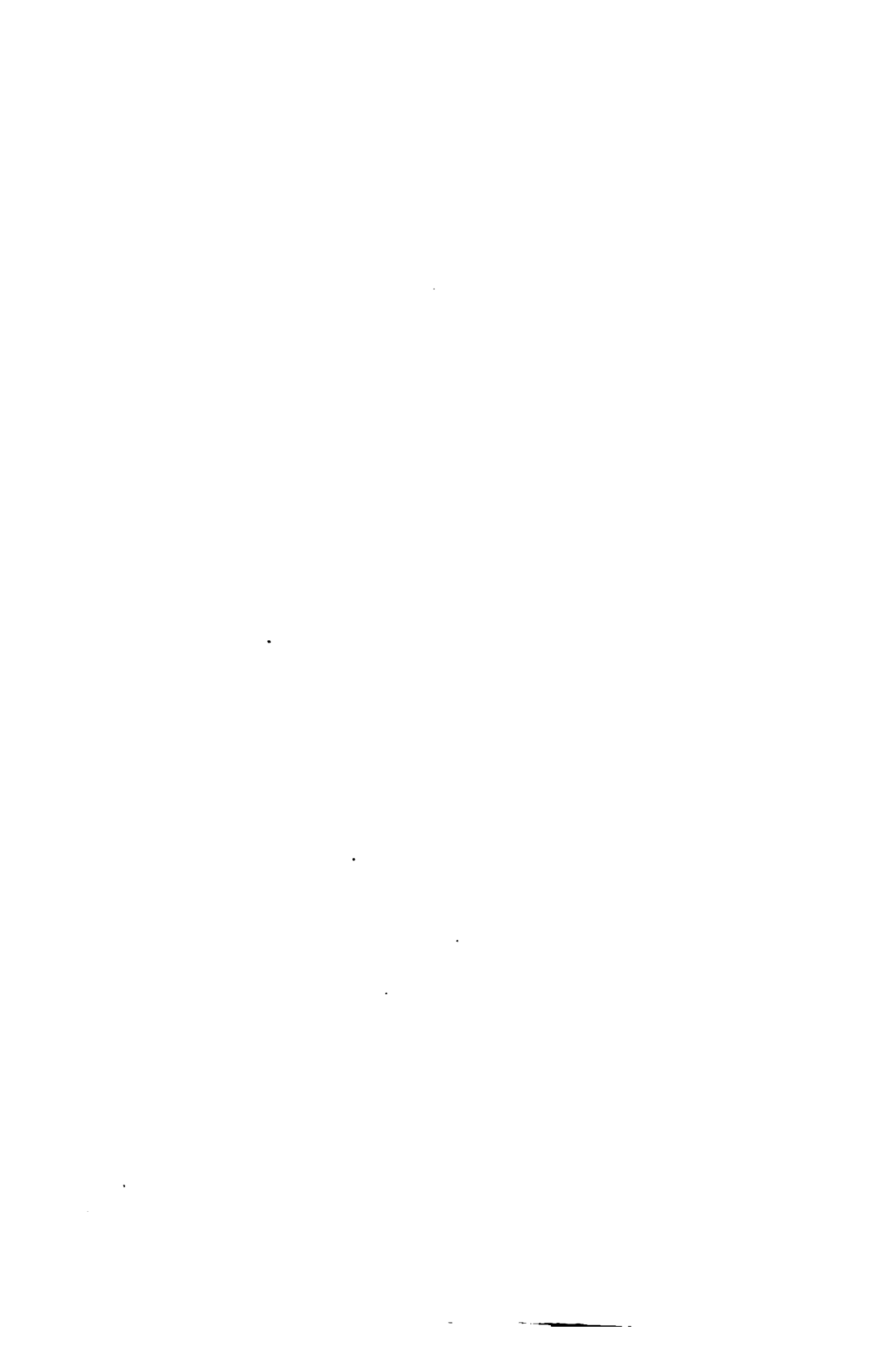
Eggs.—These vary in number from four to five, and are pale bluish with black and purple spots, chiefly in a zone round the large end.

VARIETIES occasionally occur without markings.

LANZI



BULLFINCH





CROSSBILL.

Genus III. *Loxia*, Linn.

LOXIA.—*Loxos* (Gk.) = curved.

The members of this genus may be distinguished from all others by the crossed form of the beak. The male is red, and

the female green. They inhabit northern latitudes. Only one species is British, but two or three others have occurred as visitors.

82. CROSSBILL.

Loxia curvirostra, Linn.

Korsnab (Sweden).

Batsak lodde (Lapland).

CURVIROSTRA.—*Curvus* (L.) = arched, *rostrum* = beak.

Size.—Length $7\frac{1}{4}$ in.; expanse $11\frac{1}{4}$ in.

Plumage.—Their appears to be some doubt as to what may be considered the adult plumage of the male Crossbill. Mr. Hancock says that the red plumage is assumed the first autumn, and that the bird afterwards gradually becomes green like the female, but this theory is based upon caged birds, and observations gathered from wild birds do not support it. Mr. Wheelwright thinks that the young dress is changed for one of orange-red at the first moult, and that this gradually becomes deep-red (fig. 1); that this deep-red dress is the full plumage, and worn longer than any other, and that very old males become yellow-green. Bill pale brown; eyes dark brown; wings and tail brown; legs and claws brown.

THE FEMALE has the body brown tinged with green, darker above and lighter below, and yellowish on the rump, which becomes brighter with age, other parts as in the male (fig. 2).

IMMATURE BIRDS of both sexes may be known by the under parts being striped

with brown in the centre of each feather, and the back brownish-green.

VARIETIES.—Mr. Bond has only seen one variety, and that splashed with white, killed near Hampstead many years ago: but he is of opinion that the yellow males are nothing more than varieties, and this I am now inclined to think, seems highly probable, for, as pointed out by him, the reds in Linnets, Redpoles, Goldfinches, Bullfinches, Grosbeaks, and even the red tail of the common Grey Parrot, and the reds in numerous species of Lepidoptera are not unfrequently replaced with yellow.

The bird known as the Parrot Crossbill (*Loxia pityopsittacus*), and which differs only in being rather larger, and in having a stronger bill, is probably only a variety or race of this species.* It does not differ more than the eastern and western forms of the Bullfinch, and little more than some birds from the East and West of England. It is found principally in the forests of Scandinavia, but specimens have occurred

*In justice to some competent ornithologists, and Mr. Bond amongst the number, I should say that they regard the Parrot Crossbill as a good species, differing not only in size, but to them, in the colour of the male.

in Scotland, England, and Wales.

Note.—The call-note has been likened to the syllables "tsip, tsip, tsip," or "jip, jip, jip," and is very loud. The male has a song, but it is low and indistinct, something like that of the Starling.

Flight.—Strong and undulating; the birds keep in little companies, constantly calling to each other.

Migration.—The movements of the Crossbills are very uncertain, as they only change their positions when the severity of the weather, or the scarcity of food compels them; hence we get flocks in Britain at very irregular intervals, but always in winter, when they are stormed out in the North.

Food.—Seeds of various kinds, but principally those of conifers; the bill and muscles being specially adapted to opening the cones. The Parrot Crossbill is said to feed principally on the seeds of *Pinus sylvestris*, and the larger and stronger cones will account for a similar development in the bill of the bird, the ordinary Crossbill feeding on the larch, and other small-coned species.

IN CONFINEMENT these birds much resemble parrots in their habit of climbing about the wires of the cage. The male always loses its bright red plumage when caged, changing to green at the first moult.

They may be fed upon any of the bird-seeds, with cones, heads of thistle, plantain, &c.

Habitat.—The Crossbill inhabits fir forests; is resident, and not uncommon in various parts of Scotland, and occasionally some winters in other parts of Britain.

ABROAD it breeds in all the northern parts of Europe, Siberia, and Japan; in winter it moves more or less south, and has been obtained as far as Italy, Greece, and Algeria. It breeds sparingly as far south as the Pyrenees, and the Atlas Mountains.

Nest.—The nest has been found in almost every Scotch county, but most frequently in the central parts. It is usually placed on the top of a fir, but sometimes among the thicker side-branches, and is composed of slender sticks, with a lining of grass and lichen, with bits of wool or feathers. The nest has also been found in many parts of England.

Eggs.—The eggs are laid in February or March, and are usually four, though sometimes five may be found in one nest. The ground-colour is creamy- or greenish-white, with dark brown spots, and reddish underlying shades. Sometimes the spotting is confined to the thick end, or some of the spots elongated into streaks.

LXXXII.



CROSSBILL.





STARLING.

STURNIDÆ.

Genus L. *Sturnus*, Linn.

In these birds the bill is straight, moderately long, and rather broader than high; feathers of the head and breast elongated; wings long, the second and third primaries the longest.

We have only one native species, re-

markable for its bright metallic colours, but two or three others of this family have occurred as visitors.

The eggs of all the Starlings are without spots.

83. STARLING.

Sturnus vulgaris, Linn.

VULGARIS.—Common.

Size.—Length 9 $\frac{1}{4}$ in.; expanse 1 ft. 3 $\frac{1}{2}$ in.

Plumage.—IN BREEDING DRESS the male has the bill yellow; eyes brown; head, back, and under parts black, with bright purple, steel-blue, and green reflections; the small feathers of the head, and upper parts of the back, with pale buff tips; wing- and tail-feathers blackish, with yellowish-brown edges; the under parts are without spots; legs and toes red-brown (fig. 1).

IN WINTER the whole of the feathers on the head, back, and under parts, are broadly tipped with pale buff or white, the brown margins of the wing- and tail-feathers are broader, and the bill is horn-colour.

IMMATURE BIRDS are uniform greyish-brown, except the feathers of the wings and tail, which have reddish-brown margins, and the throat which is whitish (fig. 2). In this state of plumage, it was called by Col. Montague the Solitary Thrush. This dress is changed the first autumn, at which season the adult dress appears in patches, giving the birds a curious piebald appearance.

VARIETIES.—Pure white birds are not unfrequent. I have one in my collection given me by Mr. Bond, who has several others, one of which is silvery-white, killed at Sittingborne, and another pale grey, with darker grey margins to all the feather, killed near Leicester. Another white bird I gave to my late friend—Mr. James Varley, and it is now in Dr. Mason's collection, and a third I placed in Mr. Whitaker's collection, where there is another white tinted with drab, and one white with the edges of the greater wing-coverts rust-colour, killed in Notts. Another white bird is in the Preston Museum; Mr. Gregson has also one, and Mr. Marshall three. One white, with pale reddish spots on the wing-coverts is reported (Nat. 1864, p. 208), and a cream-coloured one is recorded in the same volume (p. 148). Pied birds are still more frequently met with. A very pretty one is given (fig. 5) from Mr. Whitaker's collection. In the same collection is one with a white head, killed in Notts; another very prettily and distinctly pied with pure white about the head and breast, killed in Sussex. Fig. 4 is taken from a specimen in the same collection, killed at Woolwich, and there is another killed in Notts similar to fig. 7, both of them



LXX XIII.



STARLING.

having patches of the normal colour on the under parts. Fig. 7 is from a specimen in my possession, belonging to Mr. Alfred Beaumont, and killed, I believe, in Ireland. Mr. Bond has a young bird (fig. 6) with the wings and tail white, killed near Darlington; also one with the tail white, killed at Warwick Castle, and one with a white ring round the neck and over the breast. The same collection also contains one with the head and breast purplish-rose showing the usual white spots, back rust-colour; wings and tail white, each feather with a rust-coloured margin, and another darker. Dr. Mason has one with a white tail.

One was exhibited at a meeting of the Haggerston Natural History Society, Nov. 14th 1873, with a bill $2\frac{1}{2}$ in. long.

Note.—The call-note is a drawn-out pipe; the alarm-note a harsh screech, resembling "tate, tate." The male has also a song, which is very low and composed of few notes, some of them harsh, but arranged in a pleasing combination; but to be heard to advantage, the hearer must be very near the bird and unobserved, as beneath an open skylight.

Flight.—The flight is performed by rapid beatings of the wings, but occasionally the bird will glide with motionless out-stretched wings. The flight of a flock of Starlings is something very remarkable, from the manner in which the whole flock will go through exactly the same evolutions, as though moved by clockwork; at one time, the birds present the broad surface of their expanded wings, looking like a dense black cloud, and at another, when all at once they turn the edges of their wings to the observer, seeming almost to disappear. When disturbed upon their feeding-ground, they usually take a short circular flight, and, when the danger is passed, return to the same place.

Migration.—Starlings may be found in some parts all the year round, but there seems to be a general move to the west-

ward on the approach of winter, as the bird is then common in Ireland, Wales, and Cornwall, where it is seldom seen in the breeding season. Great numbers also arrive at the same time upon the eastern coast of England probably from the north of Europe.

Food.—The Starling may be said to be an insectivorous bird, devouring large quantities of worms, snails, slugs, grubs of cockchafer, daddy-long-legs, grasshoppers, and locusts where they are to be found, in this way rendering great service to the farmer in clearing off noxious insects. In summer fruits enter into the fare, especially those of elder and cherries. In winter grain and seeds are sought, and in the severest weather, even hips and haws, while many resort to the coast, and draw out sand-worms, small crustaceans, and mollusks. They have also been known to feed upon aphides, and it is a very common occurrence for them to be seen perched on the backs of cattle, picking off parasites. They frequently seek their food along with Rooks, or other birds, they do not mix with them, however, but keep together, a smaller flock within a larger one.

IN CONFINEMENT the Starling may be fed upon almost any kind of bird-food, and has been taught to articulate sounds resembling the human voice.

Habitat.—The Starling has, within the last fifty years, considerably increased in numbers in England, and even penetrated into Scotland, where it is now found in all suitable parts. As already stated, it is more or less absent from Ireland, and the extreme West of England during the breeding season, but in other parts it is common, or even abundant. After the breeding season the young and old flock together, and in some parts, especially in the midland counties, vast clouds of birds covering several acres may be seen at this season. On the approach of evening these resort to some favourite roosting-place, as a plantation of evergreens, and it has been



STARLING.



CHOUQUIL

computed that as many as 200,000 have assembled in this way. Sometimes they resort to reed-beds, in which they do great damage by breaking the reeds. It is resident in the Faroes.

ABROAD its breeding range extends throughout Europe except the extreme south, being most numerous in Holland, where it is encouraged. It also breeds in South Siberia, Persia, and Turkestan, wintering in India, North Africa, and South Europe : in the Azores it is resident.

Nest.—Usually concealed, either in an opening under tiles, or in a hole in a wall, or hollow tree. Some seldom times an open nest is made, like that of the Sparrow, or at other times an old Magpie's nest is made use of. In places, such as the Outer Hebrides, where there are no trees, the nest is placed in a hole in some bank, or under stones on the beach, and one instance is recorded of its being placed in a hole on the flat surface of the ground. It is a very easy matter to induce

the Starling to take up its abode in almost any place, by putting up suitable nest-boxes. A figure is given of a set of twelve such boxes which Mr. Whitaker has had erected on a pole 27 feet long, on the grounds at Rainworth Lodge, and which are yearly tenanted by as many pairs of Starlings. Nesting operations are begun early, and eggs may be found by the middle of April. I have been unable to ascertain, from practical observations, that there are more broods than one in a season ; probably a second laying takes place only when the first is disturbed. The nest itself is but a loose accumulation of straw, sometimes with a few bits of sticks, and sparingly lined with wool, feathers, or bits of moss, rags, or paper.

Eggs.—The number varies from four to seven ; they are pale chalky-blue or greenish, without spots.

VARIETIES.—A nest of white eggs was recorded in 'Science Gossip' for 1883.

CORVIDÆ.

Genus I. *Pyrrhocorax*, Tunstall.

PYRRHOCORAX— from *Pyrrhos* (Gk.) = red, the colour of the bill and legs, and *corax* = a raven.

This genus differs from the true crows in the bill being long, arched, and pointed ; wings long, the fourth feather longest ; tail even at the end. Outer and middle

toes united to the first joint.

The eggs differ from those of the crows in not having shades of green in their markings.

Only one species inhabits this country, and a single specimen of a second has occurred.

84. CHOUGH.

Pyrrhocorax graculus, Linn.

GRACULUS— from *gracula* (L.) = some bird of the crow kind.

Size.—Length 1 ft. 4½ in. ; expanse 2 ft. 1 in.

Plumage.—Bill, eyelids, legs, and toes coral-red ; claws black ; eyes, round the pupil red, shading to blue on the outer circle ; the whole of the plumage jet-black, with steel-blue and purple reflections,

THE FEMALE resembles the male, but is rather less bright in plumage.

IMMATURE BIRDS have the plumage dull black, and the bill and legs orange-yellow.

VARIETIES.—None have been recorded.

Note.—The cry is said to resemble that of the Jackdaw, but to be more ringing and musical, and has been compared to the syllables "creea, creea," and "deea."

Flight.—The flight is described as being very similar to that of the Rook, and that the birds sail in circles, sometimes high in the air.

Migration.—In this country the birds remain in their haunts all year round.

Food.—This consists of insects, grubs, worms, slugs, crustaceans, berries, and occasionally grain, and carrion; these are sought along the shore, or in fields near at hand.

IN CONFINEMENT the Chough is said to be easily tamed, and to be very interesting and useful, if pinioned and allowed its liberty in a garden.

Habitat.—The Chough has disappeared from many British localities within the last hundred years, and particularly in inland localities. It is now only found on the coast, and even there in greatly reduced numbers. It inhabits high cliffs, and

is now found principally on the south-west coast of England—at Gadcliff, St. Alban's Head, the Cornish Coasts, Lundy Island, several parts of the Welsh coast, and sparingly in Cumberland. In Scotland, Islay is now the only locality, but it is said to be yet fairly common on some parts of the Irish coast. It is common in Guernsey.

ABROAD it is met with in the Pyrenees and other rocky parts of Spain and Portugal; also in the Alps, Apennines, Sardinia, Sicily, Greece, Caucasus, and Ural Mountains; in North Africa, in one of the Canary group (Palma), the Algerian Alps, and Abyssinia; and in Asia, in Arabia, Turkestan, Asia Minor, Persia, Afghanistan, the Himalayas, and in winter in India, and North China.

Nest.—The nest is placed deep in some cleft of rock, generally at some elevation, or similar place in some old building. It is composed of sticks, lined with wool or hair.

Eggs.—Four or five are the usual number; they have a creamy-white ground colour variously marked, spotted, splashed, or streaked with shades of grey and yellowish-brown.

VARIETIES.—One is figured by Hewatson, covered with large brown spots.

LXXXIV



CHOUQUH.



RAVEN.

Genus II. *Corvus*, Linn.

CORVUS—the Latin name.

The bill in this genus is large and strong, both mandibles arched to the point, and the base covered with stiff, bristly feathers. The wings reach nearly to the end of the tail when closed, and the fourth feather is the longest. The tail has the middle fea-

thers the longest. Outer and middle toes united to the first joint. Black is the prevailing colour in all the species.

The eggs are more or less spotted or blotched with greenish and brown.

There are only four British species, and no accidental visitors have been recorded.

85. RAVEN.

Corvus corax, Linn.

CORAX—Greek for Raven.

Size.—Length 2 ft. 2 in.; expanse 3 ft. 10 in.: female rather smaller.

Plumage.—THE MALE has the bill, legs, and toes black; eyes grey nearest the pupil, and brown on the outer edge; the whole of the plumage black, with steel-blue and purple reflections, brightest on the throat, where the feathers are elongate and pointed.

THE FEMALE is similar to the male, but duller.

IMMATURE BIRDS are less brilliant than the adults.

VARIETIES do not often occur in the British Islands, though Macgillivray records having seen both a white one and a pied one, on the Isle of Pabby. Mr. Marshall has a white one in his collection, but, I believe, not British killed. White and pied birds are said to be of frequent occurrence in the Faroes, and in Iceland, and Mr. Bond has a very fine one from the former place quite three parts white.

Note.—The note is a very hoarse "craugh," and is produced both when the bird is at rest, and also when it is on the wing.

Flight.—The flight, except for short distances, is performed high in the air,

sometimes so high that the bird can only just be distinguished. They fly singly or in pairs.

Migration.—Resident in this country throughout the year.

Food.—The food of the Raven consists of flesh, either fresh, or in a state of decay. Lambs, weakly sheep, or deer are attacked, the bird disabling its victim by picking out its eyes. Moles, dead fish, mollusks, crustaceans, and even grain are also part of his fare. In some districts, where the birds are numerous, they do great damage by their attacks upon the sheep and cattle.

IN CONFINEMENT it may be fed upon fresh meat, and has been taught to imitate the human voice very distinctly,

Habitat.—Formerly the Raven was numerous in several inland parts of Britain, but now it is confined principally to the coast, and a few rugged crags in the north. It is still common in several places in Scotland, and pairs breed every year in several English localities. Mr. Gatcomb says (Zool. July 1877) that Ravens have bred every year, for forty years to his knowledge, upon the Cornish coast, and I have seen a pair several seasons in North Yorkshire. This bird breeds so abundantly in the Faroes, that a heavy tax is levied, which can

only be averted by tendering a certain number of Raven's bills.

ABROAD the Raven has been seen at Spitzbergen ; in Iceland it is abundant ; it is common in all suitable localities in Europe, from Norway and Sweden to the Mediterranean Islands ; also in Persia, Palestine, Thibet, and the Himalayas. It is met with in the New World from Greenland to Guatemala, but is most common on the western side of North America.

Nest.—In mild seasons the birds repair to their breeding quarters by the middle of January, and from the end of that month to the end of February, the eggs are laid. The nest is placed on the rugged face of some cliff, or in a tree, and the same situation is made use of year

after year. It is composed of sticks and rough grass, lined with fur, either from rabbits, sheep, or deer.

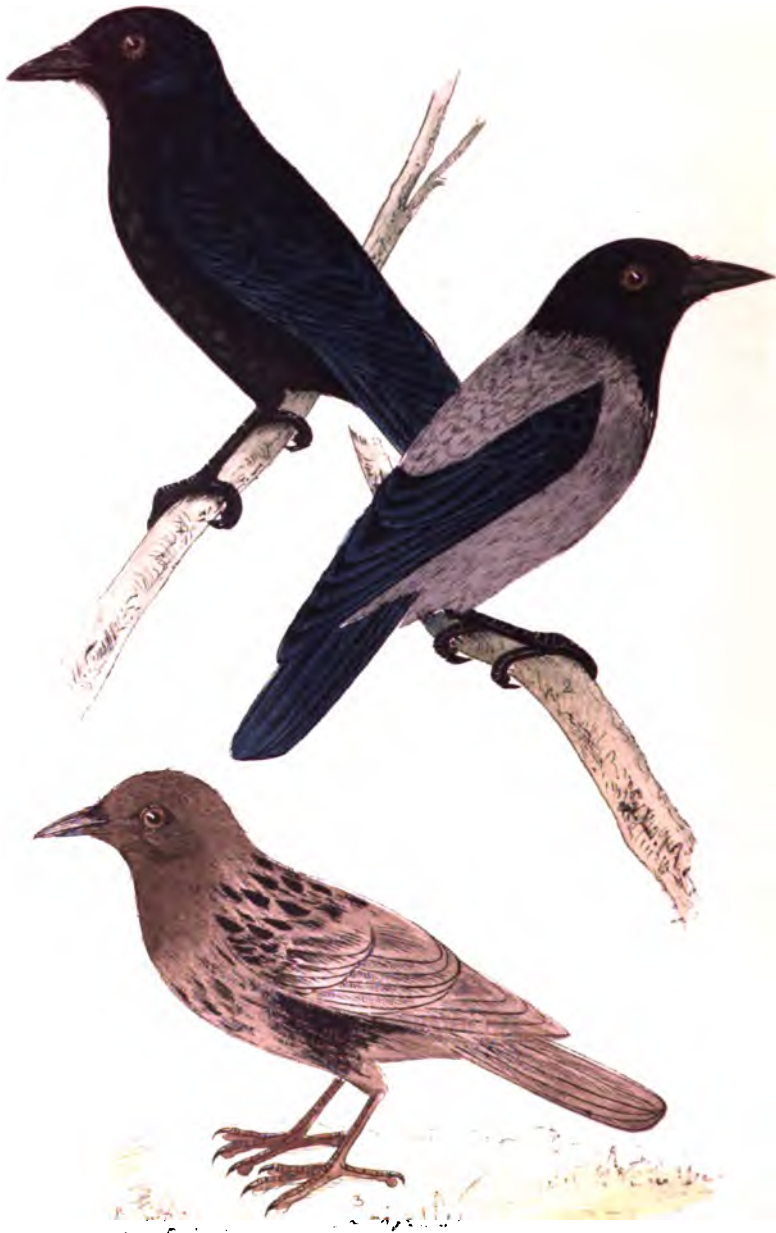
Eggs.—These vary in number from four to six, and are bluish-green, splashed, washed, and sometimes more distinctly spotted with greenish-olive, brown, blackish, and pale grey. The ground-colour is often entirely obscured.

VARIETIES pale blue with only a few rust-coloured markings sometimes occur (fig. 2). In the last edition of "Yarrell" a nest of four eggs is reported from Uast, being of a "warm creamy-white ; and the markings, which are quite normal in size and shape, consist of the greyish-purple blotches often seen, with specks, spots, and blotches of deep reddish clove-brown."

LXXXV



RAVEN.



GROW.

86. CROW.

Corvus corone, Linn.

CORONE—Greek for Crow.

Size.—Male, length 1 ft. 8 in.; expanse 3 ft. 4 in.; female rather smaller.

Plumage.—MALE, all the parts jet-black, with violet and greenish reflections on the head, back, and wings; the eyes are dark grey, with an outer brown ring.

THE FEMALE is not so bright in metallic lustre.

IMMATURE BIRDS are still less bright.

VARIETIES.—There seems to be little doubt* that the bird known as the Hooded Crow (*Corvus cornix*, Linn.—fig. 2) is anything more than a variety (it can scarcely be called a race†) of this species. The two forms, to some extent, inhabit different districts, but wherever they meet they are known to interbreed, producing birds like one or both parents, or sometimes the offspring will be parti-coloured, and like neither. The extent and colour of the slaty grey in this variety differs more or less in extent and shade, being lighter in the south than in the north, and in some of the mongrels it appears in patches on different parts of the body.

Of abnormal varieties, a young bird is figured (fig. 3) from Mr. Whitaker's collection, shot at Oxtou, Notts; he has also the head of one with the mandibles crossed.

* Mr. Bond is one of those who entertain "great doubts" as to the identity of the two forms, basing these doubts I believe, on the fact that the Hooded Crow is only found in the South during winter, while the Black Crow is found, more or less, all the year. Query—do not several species, which are migratory in northern latitudes, become comparatively resident in the South?

† I understand a race to be a form confined to a certain range apart from the type, and a variety to be a form not confined to any certain range, and occurring with the type.

In the same collection is a specimen of the Hooded variety, being entirely of a slaty grey, darker on the head, and shading off to light at the wing ends and tail. Mr. Marshall has both forms pied with white, and a Hooded Crow, with white wing-coverts, has been recorded (Zool. xxi, 8721).

Note.—The note is a hoarse croak, similar to that of the Raven.

Flight.—The flight is performed by regular flapping of the wings, and the birds sometimes sail in circles at a great height.

Migration.—The crow moves southward on the approach of winter, and in a reverse direction on the return of spring. The Black Crow is most abundant in the south, and the Hooded Crow predominates in the north, hence, the latter, which is common in Scotland, is seldom seen in England except in winter, when numbers usually arrive both from North Britain and Scandinavia. Many of the Black Crows which breed in England, directed by the same impulse, move for the Continent on the approach of winter.

Food.—This consists of grubs, worms, large insects, young birds, young rabbits, leverets, shell-fish, crustaceans, carrion, and sometimes fruit and grain. The shells of mollusks are broken by being taken high in the air, and then dropped so as to fall among stones. This bird is also very destructive to the eggs of game-birds, inserting its bill in one end of the egg and sucking the contents. It will also attack weakly sheep and young lambs.

IN CONFINEMENT it may be fed on flesh meat, varied with any of the above, or walnuts. Crows are easily tamed, especially if taken from the nest when young.

Habitat.—As before stated, the Black

Crow is most common in England and Wales, and the Hooded Crow in Scotland and Ireland, frequenting wooded districts and moorlands. Owing to its destructive habits, gamekeepers and shepherds have greatly reduced the numbers of this species of late years, and it is much less common than formerly.

ABROAD the Black Crow is found as far south as Morocco, and Cape Verde Islands; from the South of Europe it becomes commoner, being most numerous in France, Germany, Caucasus, and South Russia; rare in Scandinavia, but common in certain parts of South Siberia, Turkestan, and Japan. The Hooded Crow, though found occasionally as far south as the Black one, has generally a more northern range, being a visitor to Iceland; common in Scandinavia, North Russia, Caucasus, Turkestan, Afghanistan, Palestine, and Egypt; and in winter in Germany, France, and more rarely in South Europe.

Nest.—The normal nesting place of the Crow is in trees, where a large mass of sticks is accumulated year after year,

the structure being lined with moss, wool, fur, or feathers; but in Scotland the Hooded Crow has acquired the habit of nesting on the ground on open moors, in places where, in former centuries, trees probably grew, and in this case heather and rough grass are added to the nest-material. This diversity of habit, however, is not constant, for in Holland the Black Crow nests on the ground, while in Norway and Sweden the Hooded Crow selects trees. The birds may be seen in pairs throughout the winter, and at the end of February, or early in March, they resort to their old breeding quarters, and repair the nests.

Eggs.—From four to six, rather less than those of the Raven, wanting the very dark spots, and generally more washy-looking. They vary in the extent of spotting, but the ground-colour is usually more covered than in those of the Raven.

VARIETIES sometimes occur pale blue, and Mr. Bond informs me he has seen some similar to the Raven's eggs described by Prof. Newton.

LXXXVI



C R O W .



ROOK.

87. ROOK.

Corvus frugilegus, Linn.

FRUGILEGUS.—*Fruges* (L.)= fruits; *lego*=to collect or gather.

Size.—Male, length 1 ft. 7 in.; expanse 2 ft. 4 in. Female generally the smallest.

Plumage.—THE ADULT MALE has the base of the bill, all round the eyes and chin bare of feathers, and covered with a whitish skin; eyes brown; the remainder of the bird black, with purple reflections on the upper parts, and the feathers of the head hair-like and soft.

THE FEMALE is similar, but less and rather duller.

IMMATURE BIRDS have very little of the purple gloss, and have the base of the bill covered with feathers. In this state of plumage the Rook has often been mistaken for the Crow, but the latter may be distinguished by its stouter bill, and by the greenish reflections on the feathers.

VARIETIES.—Mr. Bond has one white, except the head and wing tips, which are speckled with grey, killed near Windsor; another with a white saddle over the back, and white on the under parts, killed on Botsam Fen; a slaty-grey one, killed near Worthing; one dingy white, darker on the wings, this latter being a young bird; also an old bird much suffused with grey on the upper parts, but having all the feathers tipped with black, and those on the wings and tail distinctly barred. Pied birds are not unfrequent, but from the quantity of young ones killed they are seldom permitted to attain the adult state. A white one is reported (Sci. Gos. Jan. 1879) as having been seen near Darsley; another is in the York Museum, two in the Preston Museum, one in the Newcastle Museum, and one in Mr. Marshall's collection at Taunton. Mr. Gurney has a pied bird,

and Mr. Gatcomb records (Zool. 1881 p. 50) a young bird killed in Devon, having "the head, part of neck, and quill-feathers of the wings white; tarsi black, but bill and toes of a beautiful chrome-yellow, with here and there a few black spots; claws white." Selby says, "I possess two of a sienna-yellow, with wings and tail inclining to golden-grey, with red irides, and with the bill and legs flesh-red, taken from the same nest in which were two of the normal colour." One is recorded (Nat. 1864, p. 259) as being "all brown." A figure is given of a pale variety from Mr. Whitaker's collection; a Notts bird. Two cream-coloured ones are noticed in Grey's 'Birds of the West of Scotland.'

A very interesting variety of the young bird sometimes occurs, in which all the feathers are tipped or barred with grey, as is regularly the case with most Passerine birds. Hancock figures one of this variety ('Birds of North. and Dur.'), others are mentioned by Yarrell, and two are in the Rev. G. D. Armitage's collection at Lutterworth. It is remarkable that this barred plumage should be cast at the first moult, the only adult barred bird that has come under my notice being that above mentioned in Mr. Bond's collection.

Malformations of the bill are not unfrequent in this species, one is figured by Yarrell with the lower mandible elongated, and bent upward; Mr. Whitaker has the head of another with the upper mandible similarly deformed; and one belonging to Mr. Alfred Beaumont has both mandibles double their ordinary length and very much crossed.

Note.—The "caw" of the Rook must be familiar to everyone who can hear. The note of the young bird is more like

"ka," and the old ones have a variety of notes during nesting time.

Flight.—The flight is performed by a series of easy and regular flaps, but sometimes, principally in windy weather, and often before rain, the birds will ascend to a great height, wheeling in circles, and occasionally dropping suddenly in a zig-zag flight into trees beneath them.

Migration.—Most of the Rooks bred here stay all the year, but in autumn some arrive from the North of Europe, and others leave for the South.

Food.—The Rook has been called the "Farmer's Friend," and he has certainly much to thank the bird for. During the greater part of the year it consumes large quantities of insects, slugs, snails, and worms. It is particularly useful in destroying wireworms, grubs of cockchafer, turnip caterpillars, crane-flies and their grubs—leather jackets. Field-mice, young birds, young rabbits, and even eggs are sometimes taken, and when pressed, potatoes or turnips are bored up, or acorns collected, and on the coast crustaceans and dead fish. The Rook has also been known to take corn, and I have seen a flock alight in the middle of a corn field, but being in an express train at the time I was unable to ascertain for what purpose.

IN CONFINEMENT young birds should be fed principally on animal food.

Habitat.—The Rook is common all over England, and of late years has extended its range into Scotland, being found more or less on the mainland and occasionally in the Outer Hebrides, Shetland, and the Faroe Islands. It is a gregarious bird, most of the members of a colony probably keeping together for life. In winter several

colonies often associate together, and roost away from any rookery. The Rook does not always form its colonies near the habitation of man; in upper Swaledale, and on the High Peak of Derbyshire, rookeries are established far away from any house.

ABROAD the European breeding range of the Rook extends from the Arctic Circle to the Mediterranean, the birds leaving the northern parts on the approach of winter. It is also met with in North Africa, Asia Minor, from North Persia to North-west India in winter, and in Western Siberia and Turkestan in summer.

Nest.—At the end of February, the birds begin to repair the old nests, and to re-build such as have been destroyed by wind and storm. The materials used are sticks, broken from the trees or picked up from the ground, cemented together, inside the nest, with mud and clay, and lined with turf, roots, moss, dry leaves, feathers, or any available soft material. The birds are very quarrelsome during the process of nest-building, fighting, and stealing each others materials. The nests are nearly always placed in trees, but sometimes a lower site is chosen, and one is recorded as having been built on the ground. Rookeries may be established by putting up artificial nests, or by placing eggs in the nest of the Magpie.

Eggs.—The eggs vary much both in shape and markings; usually they are light blue or greenish, with washy splashes and spots of olive-green and brown.

VARIETIES.—The eggs are exceedingly variable in colour and markings, but a very unusual one is figured on plate lxxxviii, from Mr. Whitaker's collection.

L. X X X V I I .



R O O K .



JACKDAW.

88. JACKDAW.

Corvus monedula, Linn.

MONEDULA.—The Latin name.

Size.—Male, length 1 ft. 2 in.; expanse 1 ft. 10 in. Female generally the smallest.

Plumage.—**MALE**, bill black; eyes greyish-white; top of head black, with purple reflections; ear-coverts, sides of neck, and behind the head grey; all the rest black, with purple and green reflections on the wings and tail, and less so on the back; legs and toes black (fig. 1).

THE FEMALE is duller, and has less grey on the neck and head.

IMMATURE BIRDS are less bright, the under parts greyish-black, and scarcely any grey on the neck.

VARIETIES.—Mr. Bond has one silvery-white, killed near Saffron-Waldon, and another much patched with white on the lower part of the back, wings, and tail, killed near Liverpool in 1880. In the same collection is one (fig. 2) which has a brown back, killed near Hammersmith. Mr. Whitaker has one (fig. 3) nearly white, killed in Somerset; another speckled with white on the under parts and secondaries, and one in which the blue-grey of the neck extends downwards over the whole body, shading off to light grey on the primaries and tail; another (fig. 4) killed in Leicestershire in 1884. Mr. Marshall has four white birds, Mr. Gurney has a pied one, and there is a lead-coloured one in the Preston Museum.

Note.—The cry of the Jackdaw is well known, resembling the syllable "yack," and with a clear ringing sound.

Flight.—The flight differs from that of the other Crows in being performed by a series of rapid flaps of the wings, but sometimes the birds will glide in a hawk-like fashion, and then, again ascending,

will resume the ordinary flight. They usually fly in pairs, even when flocked together, the flock is composed mainly of pairs.

Migration.—The Jackdaw resides with us throughout the year, but in the northern countries of Europe it is migratory, leaving for the south on the approach of winter.

Food.—The food of the Jackdaw is almost exactly the same as that of the Rook, at least, so far as the smaller fry is concerned, and the two birds often associate together in their search for insects, worms, grubs, wireworms, and other similar creatures which are often a great pest to the farmer. In the autumn the Jackdaw is more troublesome, as he will then do harm by pilfering fruits, and will also eat acorns, beech-nuts, and in winter, even carrion and offal. In the Zoologist for 1853, p. 3983, a charge, apparent well founded, is brought against the Jackdaw of stealing eggs and young of game and smaller birds.

IN CONFINEMENT no bird is more easily tamed if taken from the nest when young, but its propensity for pilfering small articles especially such as are bright and shining, renders the Jackdaw a rather troublesome bird. Scarcely anything eatable will come amiss.

Habitat.—Abundant in some parts, and generally common all over Britain to the North of Scotland, the Outer Hebrides excepted. It also breeds sparingly in Orkney, but it is only an accidental visitor to the Shetlands, and very rarely seen in the Faroes. Frequently it is found near some ruin, castle, church, or other habitation, while at other times the colonies

centre in a forest, or on some sea- or inland-cliff.

ABROAD it is met with in all parts of Europe, from the Arctic Circle to the Mediterranean Islands, but is more local in the South. In Africa, it has only been reported from Algeria, and as an accidental visitor to the Canary Islands and some parts of Morocco. In Asia it occurs in Western Siberia, but does not reach so far north as in Scandinavia; it also breeds in Turkestan and Cashmere, and has been reported as a winter visitor to the North-Western parts of India.

Nest.—The nest is composed of sticks sometimes an immense quantity, lined with any soft substance, such as moss,

grass, or fur. It is placed in a crack or cavity, either in a cliff or old building, or in the hollow of a decayed tree, and in very rare instances, in rabbit burrows. Large quantities of Jackdaws breed every year in the cliffs at Flamboro' Head, as also in the old oaks in Sherwood Forest, and another colony rear their young in the chinks between the gigantic blocks at Stonehenge. Breeding operations usually begin in April.

Eggs.—By the end of April eggs are laid, there being from four to six in a nest. They are very pale bluish-green, speckled or spotted with ashy-grey and blackish.

VARIETIES sometimes occur without spots.



Malformation in the Bill of the Rook.
From Mr. Beaumont's specimen.

LXXXVIII



JACKDAW.



Var. of ROOK.



•



MAGPIE.

Genus III. *Pica*, Linn.

PICA—the Latin name.

The Magpies may be distinguished at once from the other Corvidæ by the long graduated tail, and short wings.

There is only one Species British, well known to every dweller in, or visitor to the wooded country, and no other species of this genus is found in Europe.

89. MAGPIE.

Pica caudata, Flem.

CAUDATA—from *cauda* (L.)=a tail.

Size.—Length 1 ft. 8 in.; expanse 1 ft. 8 in.; female slightly less.

Plumage.—Bill black; eyes dark brown; head, back, and as far as the breast, rich black, with slightly greenish reflections; rump grey; upper tail-coverts black; tail, beautifully shot with green and purple metallic lustre, violet towards the end; scapulars pure white; wings black, with rich green reflections, and a white dash on the inner web of all the primaries; belly white; under tail-coverts and thighs blackish; legs and toes black (fig. 1).

THE FEMALE is similar to the male.

IMMATURE BIRDS are like the adults.

VARIETIES.—Mr. Bond has an albino shot in Hertfordshire, and another with the dark parts very pale (fig. 2); one white, except the tail and primaries which are normal, has been recorded. A pied one is in the York Museum, and Mr. Marshall has two pied, and two white ones in his collection. Mr. Whitaker has one with all the parts usually black or green replaced by rust-brown (fig. 3), and another similar to fig. 2, but with no green reflections on the wings. Mr. Alfd. Beaumont has one with all the dark parts reduced to a very pale grey, almost white. One is recorded in the 'Zoologist' for 1867, having a yellow beak, thus agreeing with the South Californian

Species [?] (*P. nuttalli*). One is mentioned by Macgillivray as having the whole of the plumage, including legs and bill, red-brown, and Grey records cream-coloured specimens, shot in Argyleshire.

The Magpie has a wide geographical range, and, as may be expected, presents considerable variation. The Siberian specimens have the most white on the primaries, and have been named *P. leucptera*, Gould, while those from Thibet, called *P. tibetana* Hodgs., have much less than the normal quantity. The grey on the rump is either small, or entirely absent in specimens from the Spanish peninsula, while in American and Siberian birds, the tail is unusually long.

Note.—The note is a harsh chatter.

Flight.—The flight is in a straight line, slow, and apparently laboured. Writers on British Birds refer to the "noble sport" of hawking, and some specially refer to Magpie-hawking as being "far superior" to all others. What there can be that is "noble" about tormenting, and keeping in painful suspense and agony, a poor defenceless creature, I am at a loss to conceive.

Migration.—In the north the Magpie is migratory, leaving for the south on the approach of winter, and returning again in the Spring. Numbers arrive every autumn from the North of Europe.



JAY

Genus IV. *Garrulus*, Briss.

GARRULUS (L.)=chattering.

The European Jays may be known generally from the other members of the *Corvidæ*, by their brown tints and general gay colour. Bright blue, which is found on the wings and other parts of most Jays, is

a colour which never appears in true Crows.

There is only one species in Britain, and two other forms are European. One American species is mottled with bright blue on all parts of the body.

90. JAY.

Garrulus glandarius, Linn.

GLANDARIUS—from *glans* (L.)=acorn.

Size.—Length 1 ft. 2 in.; expanse 1 ft. 7 in.

Plumage.—Bill nearly black; eyes pale blue; top of head, the feathers elongated into a crest, the front part of which is whitish-grey, each feather with a black stripe down the centre; back part of crest, nape, back, and sides below the wings, mealy-chestnut; upper tail-coverts white; tail black, sometimes with indistinct blue bars near the base; primaries blackish, the narrow outer web white; secondaries glossy black, each with a pure white patch on the basal part of the outer web, and the innermost feather chestnut with a black tip; wing-coverts black on the inner web, the outer one being barred alternately with black, white, and bright blue: a large black patch on each side of the mouth; throat, vent, and under tail-coverts dull white; legs and toes brown (fig. 1).

THE FEMALE resembles the male.

IMMATURE BIRDS are like the adults.

VARIETIES.—Mr. Whitaker has two pure white, one of them killed by himself, and a young bird about half grown, being also white, but showing peppery specks of colour on the wings and tail. In the same collection is a pied bird (fig. 2), killed in Notts, and one having the white on the

secondaries unusually extended. In Mr. Marshall's collection there are two white birds, and another is reported (Zool. Jan. 1877) as having been taken from a nest near York, and a second was killed near the same place in the autumn of the same year (Zool. Mar. 1878). Mr. Bond has one with a good deal of white about the head and body.

Some modifications are found in the colour of Jays from different parts of the world, but whether these be all distinct species, or local races, is open to question; there is little doubt that they interbreed, for intermediate forms are met with, which seem to connect most of them. In South Siberia, the Amoor Valley, and North Japan the ground-colour of the crest is chestnut, and the back greyer than in our bird; this form has been called *G. brandti*. In South Japan the crest is whiter, and the black at the gape extended. On the South-West shores of the Caspian the mealy-chestnut of the back and sides is much richer, and the crest-feathers are black, with reddish margins (*G. caspius*, Seeb.); in Turkey, Asia Minor, Caucasus, Palestine, and South Persia, the crest is black except the front part which is white (*G. atricapillus*) but in Asia Minor, some specimens have the front part of the crest spotted (*G. anatolia*); in Algeria the crest is black, but

the sides of the head whiter (*G. cervicalis*),

Note.—The alarm note of the Jay is a harsh scream, this usually first calling the attention of the observer when the bird is about to take wing, but in spring small gatherings sometimes take place, and the birds then seem to compete with each other, in their attempts to produce a series of notes which can scarcely be called a song. Jays are very imitative, and will reproduce the notes of other birds, or of sounds they are in the habit of hearing.

Flight.—The flight is irregular, performed by rapid beatings of the wings, and usually from tree to tree, but sometimes, when the flight is for longer distances, the birds fly above the tops of the trees, dropping suddenly when they wish to alight.

Migration.—The Jay is resident in all European localities except the south-eastern countries, and the birds from the extreme north move south on the approach of winter. Large flights have sometimes been noticed passing Heligoland from east to west.

Food.—Like the other members of the present family, the Jay will feed upon a variety of substances, including worms, snails, grubs, caterpillars, and large insects; in summer fruits and berries form a part; in autumn acorns, beech- and hazel-nuts; in winter peas or beans, when these can be found stacked, or even carrion. The Jay has received a bad name for destroying the eggs of pheasants or other game-birds, and it has also been known to capture and

eat small birds.

IN CONFINEMENT the Jay is a favourite bird, partly from its gay plumage, and partly from the fact, above mentioned, that it readily learns to imitate sounds. When taken from the nest the young birds should be fed upon chopped bread, curds, and finely chopped meat. When older nuts and corn may be given, varied with any of the above, and plenty of fresh water. The Jay should never be kept in a small cage.

Habitat.—This is a common bird in all wooded districts in England, but is becoming rarer, owing to incessant persecution by keepers. In Scotland it is less frequently seen, and is absent from the Hebrides, Orkney, and Shetland. In Ireland it is local in the south.

ABROAD the British form is found in all suitable localities in Europe, occasionally as far north as Lapland. [See VARIETIES.]

Nest.—The nest is begun early in April and is built in a holly or other evergreen, or sometimes among bramble or honeysuckle which have overgrown large shrubs. The foundation is a mass of sticks, with a cup-shaped hollow at the top, which is sometimes plastered with mud, and always lined with fine roots.

Eggs.—From five to seven is the usual number. The ground-colour is bluish-green, thickly speckled with greenish-brown, and often with one or two blackish streaks near the large end. Some specimens show more of the ground-colour, having the specks in a zone round the large end, as in figure 2.



J A Y.



GREEN WOODPECKER.

PICIDÆ.

Genus I. *Picus*, Linn.

PICUS—the Latin name.

The Woodpeckers are distinguished by the wedge-like form of the bill, the graduated stiff bristly tail, and by their having only two toes in front and two behind.

All the Woodpeckers are climbing birds, in which act they are greatly assisted by the stiff shafts of the tail-feathers.

They hack holes in timber in search of insects, and for purposes of nidification.

Three species are met with in this

country, and five others have occurred as visitors. The colour is mostly black and white, but sometimes all black, or green, and most species have some scarlet about the head, but in some abnormal species this colour is replaced by yellow.

The green species has been separated under the name *Cecinus*, but the difference is so slight that they may all be kept under the one Linnean term.

91. GREEN WOODPECKER.

Picus viridis, Linn.

VIRIDIS.—(L.)=green.

Size.—Length 1 ft. 1 in.; expanse 1 ft. 8 in.

Plumage.—**ADULT MALE**, bill horn-colour, darker at the tip and paler at the base of the lower mandible; eyes bluish-white; the feathers at the base of the bill, round the eyes, cheeks, and a long patch at the gape black; top of head and centre of the gape-patch bright scarlet; upper parts dull green; rump and part of tail-coverts greenish-yellow; wings olive-green, the inner web of tertials and secondaries, and outer web of primaries blackish barred with yellowish-white; tail brown, indistinctly barred with paler colour: throat, breast, and under parts greenish-grey, the feathers barred towards the vent; legs and toes horn-colour (fig. 1).

THE FEMALE differs from the male in having no scarlet on the gape-patch, and the under parts are more distinctly barred.

IMMATURE BIRDS on leaving the nest are barred with sooty-black on both upper and under parts, the black on the cheek and round the eye is absent, and the gape-patch is spotted with scarlet in the male,

and brown in the female; afterwards the bars are only distinguishable on the lower parts (fig. 2), and these are lost at the first moult.

VARIETIES.—A beautiful variety is figured (fig. 3) from Mr Bond's collection, it was killed in Devonshire. Mr. Gurney has an old male with the feathers of the neck and rump tipped with flame-colour, and those on the back with golden-yellow, killed in Norfolk, Dec. 1852 (Zool. 1858, p. 3800). Sometimes the red on the head is tinged behind with golden-yellow. Prof. Newton mentions an Italian specimen of canary yellow, except the crown of the head which was bright purple-red. Sometimes the tips of the wing- or tail-feathers are bleached.

Note.—The regular note is a loud call which has been likened to "kyu, kyu," or "pleu, pleu." This bird, however has a variety of notes, one uttered by the male in spring being very harsh and comparable to the syllables "triaccon, triaccon."

Flight.—The flight is undulating, the bird generally dipping to the foot of a tree when about to alight.

Migration.—The Green Woodpecker may be said to be resident in Britain, though in winter it wanders far in search of food.

Food.—Insects, especially timber-feeding beetles and their larvæ, and such as lurk under loose bark or upon the bark of trees, in the search for which the bird climbs dexterously, beginning near the bottom of the trunk, ascending by jerks and side motions to the top, then taking flight and coming to the foot of another tree to repeat the same proceedings. The Green Woodpecker will also search for its food upon the ground, visiting ants' hills or digging in the soil for grubs and worms. It is also said to feed upon wasps, and even nuts and acorns, but these are probably broken in search of the grubs they sometimes contain. In its search for timber insects the bird hacks away with its bill, and the blows may be heard for a considerable distance. By the destruction of these insects the Woodpeckers render great service to the forester.

IN CONFINEMENT the Woodpeckers are restless birds, and ill adapted for cage life, but are said to be easily tamable if taken when ready to leave the nest.

Habitat.—The Green Woodpecker is fairly common throughout the southern

half of England, but becomes rarer from Derbyshire northwards. It prefers old wooded districts, and is common in Sherwood Forest and other similar places. In Yorkshire it is local, while further north and in Ireland it is but a rare visitor.

ABROAD this species breeds in the southern parts of Norway and Sweden, common in West Russia, Caucasus, Central Europe, West Persia, Asia Minor, Greece, along the northern shores of the Mediterranean, but not in the islands except Sicily. In Spain it is replaced by another form (*P. Sharpii*) which may only be a local race, having the forehead and round the eyes grey instead of black.

Nest.—No nest whatever is made. The birds probably pair for life, and about the middle of April select a tree with a decayed heart, and bore a circular hole in a horizontal direction until the centre is reached, and then it is turned downwards for about a foot the bottom widened out into a kind of chamber; in this a quantity of soft chips accumulate, and upon these the eggs are laid. Generally hard-wooded trees are selected.

Eggs.—From four to seven, pure glossy white, but sometimes stained with dirt or fungoid growth.

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1 GREEN WOODPECKER.

2. GREAT SPOTTED WOODPECKER.

3 LESSER SPOTTED WOODPECKER.



GREAT SPOTTED WOODPECKER

92. GREAT SPOTTED WOODPECKER.

Picus major, Linn.

MAJOR.—(L.)=greater.

Size.—Length $9\frac{1}{2}$ in.; expanse 1 ft.

Plumage.—ADULT MALE, bill bluish horn-colour, paler on the lower mandible; eyes red; nostril-coverts black, succeeded by a buff band; top of head black, a bright scarlet band beyond; round the eyes and ear-coverts white; back, rump, and middle tail-feathers black, the outer ones partly white with black bars; scapulars and greater wing-coverts white; lesser wing-coverts black; wings black, the outer webs spotted with white: throat, middle of breast, and under parts yellowish-white; vent and under tail-coverts bright scarlet; legs and toes greenish-brown (fig. 1).

THE FEMALE differs in having no scarlet at the back of the head (fig. 2).

IMMATURE BIRDS have the whole crown of the head red as in fig. 3, this colour extending furthest in the males.

VARIETIES.—Specimens having the tips of the primaries, and also those of the tail-feathers bleached to a pale drab sometimes occur; Mr. Whitaker has one of this variety in his collection.

In some parts of Asia and Eastern Europe Woodpeckers occur but slightly differing from the present species; these may be distinct, but probably many of them are merely local races. In Palestine the black band under the ear-coverts is lost, and traces of scarlet is sometimes found upon the breast (*P. Syriacus*). In the Caucasus the under parts are more chocolate (*P. Polzami*). Many of the specimens from Turkestan have the secondaries nearly all white (*P. leucopterus*). In Mongolia and China the scapulars are black (*P. Cubanisi*). Siberian and North Russian examples are larger, and the under parts whiter

(*P. cissa*). In Japan the white on the innermost secondaries is in the form of broad transverse bars (*P. japonicus*). Intermediate forms occur connecting most of the above.

Note.—This is rather a silent bird, possessing few notes and seldom using them. The principal one is a pipe resembling "kuat, kuat," and another like "tra, tra, tra." In the spring of the year both sexes produce a jarring noise, which some think is made by rapid vibrations of the bill upon the bark of a tree, but Mr. Bond from personal observations thinks that the sound is produced vocally.

Flight.—Regularly undulating.

Migration.—Resident in Britain all the year, but sometimes in the autumn we have large visitations from the North of Europe.

Food.—Like the Green Woodpecker this species searches for insects in chinks, upon the bark, or in the wood of decayed trees. It differs from that bird, however, in frequenting more particularly the upper branches rather than the main trunk. It is not known to visit ants' hills, or to seek its food upon the ground, but it will eat fruits, berries, nuts, acorns, and seeds of fir.

IN CONFINEMENT.—See Green Woodpecker.

Habitat.—This Woodpecker, though widely distributed, is nowhere common in the British Isles, though occurring in all the English, and less frequently in most of the Scotch and Irish counties; it has also been met with in the Faroes. Its breeding range is confined to England, and eggs have been reported from all the counties except Cumberland, Westmoreland, and Cornwall; most frequently from the West

Midlands. It inhabits wooded districts, or open parts studded with trees.

ABROAD it has been met with in all suitable parts of Europe as far as the Arctic Circle, through Siberia to Japan, Western Asia, and the Canary Islands.

Nest.—An excavation, similar to, but smaller than that made by the Green Woodpecker, is made in a decayed part of a tree, or a natural cavity is found and

enlarged for the purpose. No nest whatever is made, the eggs being laid on the chips which fall to the bottom of the hole. If the hole selected be too large the bird's plaster it up with mud and clay until the aperture is just large enough for one of them to pass.

Eggs.—Usually four or five, white, with a delicate tinge of blue (pl. xci, fig. 2).

93. LESSER SPOTTED WOODPECKER.

Picus minor, Linn.

MINOR.—*Minor* (L.)=lesser.

Size.—Length $5\frac{1}{2}$ in.; expanse 10 in.

Plumage.—**MALR.** This bird very nearly resembles that of the larger species in colouration, except that the lower part of the back and secondaries are barred with white, the ear-coverts are brownish-white, and are not succeeded by a black bar, the flanks, and sometimes the breast are streaked with brown, the scarlet is absent from the vent, while that on the head is confined to the crown (fig. 1).

THE FEMALE differs from the male in having the crown of the head white (fig. 2).

IMMATURE BIRDS resemble the adults, except that the head of the male is only spotted with red.

VARIETIES.—The only one of which I have any note is a white one, in, I think, Sir John Harper-Crewe's collection.

Several geographical races of this species exist. The examples from North Europe and Siberia are larger, with the under parts (except the tail-coverts), and nearly the whole of the lower part of the back silky white (*P. pipra*). In Asia Minor the under parts are darker, and a black bar runs behind the ear-coverts as in *P. major*.

Note.—The note of this species is described as resembling "tic," "kink,"

"kake," or "kirk," uttered many times in rapid succession.

Flight.—This resembles that of the larger species.

Migration.—The Lesser Woodpecker is said to be a resident wherever it is found, but, like the rest of the genus, wanders far in winter in search of food and at such times is found in places where it is not seen at other seasons.

Food.—Insects and their larvæ constitute the entire food of this species, and it seeks them mostly among the higher branches of tall trees, but sometimes, it is said, also among long grass. It is also partial to orchards, where it renders service in clearing the larvæ of the Wood Leopard Moth and other insect enemies to fruit trees, and it is said not to be open to the charge, as is the case with the larger species, of pilfering fruits.

IN CONFINEMENT the remarks made under the last species also apply to this.

Habitat.—Said to be commoner in some parts than its near relative, particularly in the Western Midlands, where it breeds regularly in the fruit districts of Herefordshire, Worcestershire, and Gloucestershire. It has been met with in nearly all the English counties as far as Yorkshire,



LESSER SPOTTED WOODPECKER.



WRYNECK.

after which it becomes rare. It is rarely met with in Ireland or Scotland, though reported as far north as Orkney.

ABROAD it occurs irregularly over the whole of Europe as far as North Finland. It is, however, of less frequent occurrence in the south, the numbers decreasing west along the shores of the Mediterranean. It is also a native of the Azores, Algeria, Sardinia, Sicily, Greece, Asia Minor, South Siberia, and Japan.

Nest.—Like the others of this genus, this species excavates a hole, or enlarges a natural cavity in the trunk of a tree, generally selecting that of a pear or apple. No nest is made except the accumulated soft chips.

Eggs.—From four to seven, and even nine have been known. They are glossy white, with a slight pink tinge. They are very similar to, but rather less and more glossy, than those of the Wryneck.

Genus II. *Jynx*, Linn. (Spelled *Yunx* by him.)

JYNX—The Greek name.

The members of this genus resemble the Woodpeckers in many of their habits, in the wedge-shaped form of the bill, the extensible tongue, the form of the toes, and in

their eggs and manner of breeding, except that they do not excavate holes for themselves, but they differ in not having the feathers of the tail stiff or pointed.

Only one species occurs in this country.

94. WRYNECK.

Jynx torquilla, Linn.

TORQUILLA.—*Torqueo* (L.)= I twist, in reference to the bird's habit of twisting its head.

Size.—Length 7 in.; expanse 10½ in.

Plumage.—**MALE**, bill brown; eyes pale hazel; the plumage is very much variegated, the upper parts being grey, mottled with shades of brown and black: throat and breast buff with fine cross bars; belly whitish, with a few arrow-headed spots; vent and under tail-coverts buff, with fine cross bars; legs and toes brown.

THE FEMALE resembles the male.

IMMATURE BIRDS are similar to the adults.

VARIETIES are rare; I only know of two—one pure white, recorded by the Rev. H. Harper-Crewe, as having been killed on the grounds at Wendover Hall, Oct. 1877 (Zool. Jan. 1878), and another in Mr. Bond's collection, with the buff and brown colours nearly absent, the

ground-colour light ash, and the black markings very distinct.

Note.—On its first arrival the Wryneck is very noisy, its note resembling "vite" or "qui" uttered several times in rapid succession. The alarm note is a sharp "ke-ke-ke-ke."

Flight.—Mostly from tree to tree, and undulating when for longer distances.

Migration.—The Wryneck is a summer visitor to this country, arriving sometimes in March, but usually not before the first or second week in April, at about the same time as the Cuckoo, from which circumstance this bird is known in many parts of the South of England as the Cuckoo's Mate. It seldom remains after the middle of September.

Food.—Insects and their grubs, especially ants and pupæ. Although this bird does search for food upon the trunks of trees, it does so more frequently among

the smaller branches or upon the ground, generally not far from an ant-hill, occasionally flying into the air to catch a passing insect. Upon trees this bird only takes such insects as it can find upon the leaves or bark, or can probe out from crevices with the glutinous point of its tongue, never digging into the wood like the Woodpeckers. It has been known to eat elderberries.

IN CONFINEMENT this is an interesting bird, and easily tamed if taken from the nest when young, but like all other insectivorous birds it requires more care and attention than most persons have to bestow.

Habitat.—The Wryneck is a common summer bird throughout the Eastern Counties as far as the Trent, but northward and westward it becomes less frequent, and north of Yorkshire and in Wales it is rare. It is a rare visitor to the Orkney, Shetland, and Faroes, and has only once been recorded from Ireland. It frequents orchards, plantations, and tall hedgerows, but is shy and seldom observed.

ABROAD the Wryneck is a summer visitor

to all suitable parts from North Scandinavia through South Siberia to Kamchatka, Altai, Himalayas, Palestine, Minor, Russia, Central Europe, and frequently in South Europe and elsewhere it is mostly observed as a summer autumn migrant on its way northward. It is a winter visitor to Nubia, India, and South China.

Nest.—No nest whatever is seen, eggs being laid upon decayed wood at the bottom of a hole in a tree; so the hole previously used by titmice is left, and then the old nest remains. It is sometimes slightly enlarged, and is entirely made by these birds.

The bird is surprised upon its eggs, and at other times, it has the peculiar habit of twisting its neck, from which its name Wryneck has been derived, sometimes hissing like a serpent.

Eggs.—From six to ten, seven or eight. They are pure white, larger, but not quite so much spotted as those of the Lesser Spotted Cuckoo. They are laid about the middle

CERTHIDÆ.

Genus I. *Certhia*, Linn.

CERTHIA—The Latin name.

Only one species of this genus is found in Europe, and but few others in other parts of the world.

In habits, and in the form of the tail, they resemble the Woodpeckers, while in

the eggs and manner of nest-building they resemble the Tits.

The slender curved bill distinguishes this from all the British birds.

95. TREE-CREEPER.

Certhia familiaris, Linn.

FAMILIARIS.—*Familia* (L.)=family, in reference to the familiarity or tameness of the bird.

Size.—Length, a little over 5 in.; expanse 7 in.

Plumage.—**Male.**—Base of lower mandible yellowish; upper parts yellowish-brown; on the top of the head, a dark streak down the centre of

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1. WRYNECK.
2. CREEPER.
3. WREN.
4. NUTHATCH.



CREEPER.

back; tail brown, with blackish tips and paler shafts; wings blackish-brown, barred with pale yellow, and tipped with dull white: under parts greyish-white, tinged with brown on the flanks and vent; legs and toes light brown.

THE FEMALE resembles the male.

IMMATURE BIRDS are similar to the adults, except that the bill is shorter and not much curved.

VARIETIES.—Mr. Bond has heard of one white, this being the only one of which I have any record.

Several races of this bird have been distinguished by separate names. Those from Cashmere (*C. nipalensis*) are the darkest and reddest. Those from Central Europe resemble the British examples, while the Northern form (*C. Scandulaca*) is much paler. A form from Italy, with the hind claw rather short has been called *C. brachydactyla*; Mr. Seebohm thinks these latter are probably young birds. Some American forms, though generally considered distinct, come very near to some of the old world forms, Mexican specimens nearly resembling those from Cashmere, while those from North America are very similar to the British form.

Note.—The call-note resembles the syllables "cheep, cheep," and in spring a short song may sometimes be heard which somewhat similar to that of the Goldcrest.

Flight.—The flight is undulating.

Migration.—The Creeper is resident in this country throughout the year.

Food.—This consists of insects, spiders, and also, it is stated, small seeds, as those of the fir. In its manner of feeding the Creeper greatly resembles the Woodpeckers, commencing at the foot of a tree, and working upwards in a spiral direction, ex-

amining every crevice as it proceeds, supported by its stiff bristly tail. The side branches are often searched in the same manner, the bird creeping mouse-like both on the top and underneath, working on to the smaller branches, when it suddenly drops and flies off to the foot of another tree, to make a similar ascent.

IN CONFINEMENT.—I am not aware that this bird has been kept in confinement.

Habitat.—The Tree-Creeper is generally distributed throughout Britain, with the exception of the Outer Hebrides and Shetland, and being only an occasional visitor to Orkney. It is, however, nowhere abundant, not being a gregarious bird. It frequents wooded districts, especially old forests with decayed trees.

ABROAD it is met with throughout Europe as far north as Christiansund in the west, and Solikamak in the east. In Asia it occurs throughout South Siberia southward as far as Cashmere, and westward through Asia Minor, and in Africa in Algeria. In America it occurs from the north side of Lake Superior to Guatemala.

Nest.—Generally placed behind a piece of loose bark, or in a cavity in the trunk of a tree. If the cavity be too large, it is first filled around the sides with bits of sticks, and then the nest proper is placed in the centre, composed of grass, roots, moss, and almost invariably lined with strips of inner bark, and a few feathers.

Eggs.—From six to eight in the first brood, but a second laying is said to consist of from three to five only. They are white, spotted round the larger end with rust-coloured spots and sunken grey shades, which vary both in size and number.

VARIETIES occasionally occur without spots.

TROGLODYTIDÆ.

Genus *L. Troglodytes*, Vieillot.

TROGLODITES.—*Trogle* (Gk.)=a cave, one who hides in caverns.

We have only one species of this genus in Britain, and it is a matter of dispute if a second occurs in Europe.

By some authors, the Wren is placed near the Goldcrests and Warblers, but by the curvature of the bill, and the shortness of the wings, it seems nearer related to the Creepers, as placed by Yarrell.

96. WREN.

Troglodytes parvulus, Koch.

PARVULUS, very small, diminutive of *parvus* (L.)=small.

Size.—Length not quite 4 in.; expanse 7 in.

Plumage.—**MALE**, bill brown, the lower mandible lighter; eyes hazel; upper parts brown, darkest on the head, and reddish on the wings and tail, which are barred with dark brown; a pale streak extends over the eye; greater and lesser wing-coverts, and upper tail-coverts, each with a small whitish spot at the tip; primaries barred with yellowish and dull black; throat greyish-yellow, becoming browner towards the under parts, where the feathers are barred with dark brown; under tail-coverts tipped with dull white; legs and toes light brown (fig. 1).

THE FEMALE is usually rather less, and not quite so bright in colour.

IMMATURE BIRDS are redder on the under parts, and the bars are not quite so distinct.

VARIETIES are rare. Mr. Gregson has one white. Mr. Bond has one white; two much mottled with white about the head, and another with the primaries white. One is given upon the plate from Mr. Whitaker's collection, with a curious patch behind the head, and some of the primaries white. Mr. Gurney has also a pied bird, and there is another in the British Museum.

As is usual with birds having such a wide range, the Wren has several geographical races, several of which have received distinctive names. In Iceland and the Faroes the Wren is larger and darker (*T. borealis*); in Turkestan much paler (*T. pallidus*); on the Himalayas very dark and red (*T. nipalensis*).

Note.—The Wren has a lively and cheerful song, by which it makes the hedgerows ring, even in the coldest weather. It is composed of a few melodious notes, and ending somewhat abruptly. The call-note resembles "tit-ti-ti-it-tit," repeated quickly if the bird be alarmed.

Flight.—The flight is never for long distances; straight, and often along a hedgerow. These circumstances have favoured the absurd and cruel custom of Hunting the Wren on Christmas Day, a practise carried on in Ireland and the Isle of Man, but which was wisely forbidden in the neighbourhood of Cork by the Mayor of that city in 1845. This custom is said to have originated from a circumstance happening when the native Irish were about to catch their Danish enemies asleep; a Wren perched upon the drum, awaking the slumbering sentinels just in time to save the army, in consequence of which the little bird was declared a traitor and outlawed.

Migration.—Resident in this country throughout the year.



WREN.



NUTHATCH

Food.—Insects, caterpillars, and especially ants and their pupæ, and in winter small berries, crumbs of bread, and such bits as can be picked up near the dwellings of man.

IN CONFINEMENT the Wren would probably be difficult to keep, so lively and restless a bird must be very unhappy unless in a very large cage, and then the wires would need to be so near to prevent escape as to greatly interfere with observation. A far better plan to enable a person to observe such birds as this, the Robin, or the Tits, is to place a box containing crumbs and bits of meat in such a position that it can be seen from a window; a bone with a little meat on it is excellent in this way, as the birds cannot carry it off, and is sure to attract Tits.

Habitat.—Generally distributed over the British Isles, being found even in the Outer Hebrides, and breeding sparingly in Orkney and Shetland. It is also met with in the Faroes.

ABROAD it has been found from the Arctic Circle in the north to the Himalay-

as, Persia, the Atlas Mountains, and Mexico in the south.

Nest.—A perfect dome, with a small circular hole in one side. The materials vary greatly, and generally that nearest at hand seems to be used for the outside, as straw, moss, dead leaves, withered bracken, &c., and the inside is lined with hair, moss, or feathers. The situation differs as much as the material—on a bank or rocky slope among herbage or tree roots, in a rock crevice, in a decayed part of a tree, under loose bark, among ivy, or in a haystack. Many nests are built which are never finished, an explanation for which has not yet been found. A pair of Wrens have been observed to commence and finish a nest in nine days.

Eggs.—From five to seven is the regular number, but sometimes as many as ten or twelve have been found in one nest. They are white, delicately tinted with pink before blowing, and with very minute red spots, chiefly at the large end.

VARIETIES frequently occur without posts.

SITTIDÆ.

Genus I. *Sitta*, Linn.

SITTA—the Latin name.

This is another genus of which there is only a single British representative, another on the continent of Europe, and about sixteen in other parts of the world.

They resemble the woodpeckers in many

of their habits, but the arrangement of toes is normal, and the tail is short like that of the wren.

Some of the exotic species build mud nests on rocks.

97. NUTHATCH.

Sitta cæsia, Wolf.

CÆSIA.—From *cæsius* (L.)=blue sky, in reference to the colour of the upper parts of the bird.

Size.—Length nearly 6 in.; expanse

10½ in.

Plumage.—Male, bill bluish-black, yellowish under the lower mandible; eyes hazel; the whole of the upper parts and

the two middle tail-feathers bluish slate-colour; rest of tail-feathers black, succeeded by a white patch, largest on outside feathers, and grey tip; flight-feathers brown: through the eye runs a blackish streak; throat and under the eye white, shading to buff on the under parts; flanks and under tail-coverts chestnut, the latter each with a white tip; legs and toes light brown (fig. 1).

THE FEMALE resembles the male, but the chestnut on the flanks is paler, and the general colours less bright.

IMMATURE BIRDS are like the adults, but the chestnut on the flanks is nearly absent, and the bill is much paler.

VARIETIES.—Mr. Gurney has a white specimen in his collection, and a pied one from Mr. Bond's is figured on the plate, this was killed at Black Park, Bucks, in 1862. In the North of Europe the breast is white, and this form is the *S. Europæa* of Linn.

Note.—The ordinary note is a sharp "two whit," similar, as pointed out by Mr. Seebohm, to the striking of a cane upon the air; the note is generally repeated in quick succession. In spring the male has also a prolonged shrill whistle.

Flight.—The flight is mostly for short distances, but when for longer ones it becomes undulating.

Migration.—The Nuthatch is resident in this country throughout the year, never wandering far from its breeding quarters, except in winter, when it visits orchards and gardens.

Food.—During spring and summer, insects form the chief support of this species. These are sought on trees, either upon the trunk or along the side branches. With equal ease the bird will ascend, descend head downward, or run along the under side of a branch. Unlike the Woodpeckers the Nuthatch does not make use of its tail in climbing. It sometimes visits the ground, and searches under dead leaves or among herbage; or in spring it

will sit upon a branch and dart at passing insects after the manner of a Flycatcher. In autumn it will visit the woods, and live largely upon nuts, beech-mast, and acorns. Its mode of cracking a nut is to fix it in a chink in some rough bark, and a post, and hack away with its bill until it breaks the shell—hence its common name. If a splinter flies off from the kernel, and the nut be jerked out of its place by the heavy blows, the bird immediately goes after it, and secures it before it reaches the ground. I have sometimes found the round marble-gall of the oak (*Cyn. Kollari*) fixed and broken in this way probably by this bird. In winter, when food is scarce, it will eat corn and other seeds.

IN CONFINEMENT the Nuthatch is very restless, and never long survives, and taken from the nest when young. It becomes very tame, but where practised is far better to observe them in a state nature. In districts where these birds are found, they may be induced to visit particular tree by fastening nuts or galls upon its trunk, as pointed out by Atkinson (*Zool.* p. 213). By such means for two years, this gentleman had frequent opportunities of watching a pair, who were induced to pay daily visits to an old berry tree opposite his window, the bird becoming so tame that they would sit in two feet while he fixed the nuts on the bark, and if one was thrown into the air, they would fly after and catch it.

Habitat.—In the southern part of England, the Nuthatch is a fairly common bird, but in the northern portion it is less frequent occurrence, and in Scotland is very rare. It has not been reported from Ireland. It frequents wooded districts preferring forests where there is plenty of thick old timber. In Yorkshire it is not so common but has been met with sparingly in some places.

ABROAD it is found throughout Europe except the extreme north-west; in Asia from Siberia to Kamschatka (?),

[illegible]



CUCKOO.

and in central Asia.

Nest.—Breeding operations usually begin about the middle of April, by the bird selecting a tree with a hole in it. If the hole be large, the entrance is plastered up with clay, until the bird can just pass. The nest itself is but a poor affair, simply a few dead leaves, thin scales of fir bark and perhaps of other trees, and dried blades of grass. Sometimes, but very rarely, a hole in a wall is selected and treated in the

same way, and there is, in the British Museum, a nest which was taken from the side of a hay-stack, having 1 lb. of clay in its structure, and lined with fine scales of fir-tree bark.

Eggs.—From five to eight are laid at a sitting; they are white, with rust-brown, purple-grey, and sometimes dark purple spots. The spots vary greatly in size and number, but are mostly distributed round the large end (pl. xcii, fig. 4).

CUCULIDÆ,

Genus L. *Cuculus*, Linn.

CUCULUS—the Latin name.

The British Cuckoo is the only European representative of a genus of about thirty species, found in all parts of the world except the Arctic Regions. There are also Cuckoos belonging to other genera, making a total of nearly 200 species.

The members of the present genus are characterized by the long wings, long

graduated tail, short legs (tarsi) feathered for nearly half the length, and by the toes being placed as in the Woodpeckers—two before and two behind.

The greatest peculiarity in these birds is, that they make no nest, but lay their eggs in the nests of other birds, the young being tended by the foster parents.

98. CUCKOO.

Cuculus canorus, Linn.

CANORUS.—From *cano* (L.)=I sing.

Size.—Length 1 ft. 2 in.; expanse 1 ft. 10 in.

Plumage.—**MALE**, bill blackish, paler at the base; sides of mouth, eyelids, and eyes yellow; the whole of the upper parts slaty-grey; flight-feathers darker, and barred with white on the inner web; tail-feathers dark, with tips white, and a series of light spots along each shaft, and at the edges of the feathers: throat and breast grey; under parts white, barred with black; legs and toes yellow (fig. 1).

THE FEMALE differs from the male in having more or less rufous colour about her, particularly on the neck and breast.

IMMATURE BIRDS have the eyes brown; the upper parts barred with light and dark brown, or with red-brown, similar to that of the female Kestrel; flight-feathers dark brown, barred with red-brown on the outer, and white on the inner webs; tail dark brown, barred with a mixture of red-brown and white; behind the head is usually a white patch: under parts dull white, barred with blackish (fig. 2).

The young Cuckoo, before it is able to see, and almost as soon as it is hatched, sets to work to turn out of the nest any eggs or young birds that may be in it belonging to the rightful owners, and its sole endeavour seems to be, to get them upon

its back and lift them over the edge of the nest, in which act it perseveres until it succeeds, and when two Cuckoos happen to be in the same nest the same fate has to befall one of them. Dr. Jenner was the first to discover this peculiarity in the life-history of this bird, and his observations have been several times confirmed, very recently by Mr. Hancock. Some of these observers have pointed out that the back of the young Cuckoo is unusually broad, and that it has a central depression, different from other birds, which is lost when its object is accomplished. The young Cuckoo is most voracious, and its instinct tells it that it alone will need all the foster parents can provide. After it leaves the nest they still feed it, in which task they are often assisted by other birds, they, often mounting upon its back in order to place a morsel in the mouth of a bird several times the size of themselves.

VARIETIES.—Mr. Marshall has a white one in his collection. Mr. Bond informs me that a white one was once seen near Warrington by Mr. Greening, and that many years ago he saw a cream and white one in the possession of Hugh Reid of Doncaster. My informant has, in his own collection, a young bird with white pinions and secondaries, shot in Sussex. "An immature female, shot at Beeston Regis, near Cromer, on August 6th, 1862, had the whole surface of its plumage mottled with patches of white, more particularly about the back and breast" (Nat. 1864, p. 149). The prettiest variety I have seen is in Mr. Whitaker's collection, and is figured upon the plate (fig. 3).

Note.—It is said the male only has a song, which is commenced soon after the bird's arrival in England. About the middle of June the ordinary "cuc-koo" is altered to "cuc-cuc-koo," and by the end of that month generally ceases altogether. The Cuckoo sometimes sings upon the wing, and the usual note is then occasionally succeeded by a laughing chatter. Mr. Bond thinks this chatter is confined to the

female bird, but if so she sometimes sings as well, for I have heard the "cuc-koo" and chatter repeated alternately by the same bird as it flew across an open space. The Cuckoo will also sing very late, I have heard it at 11 o'clock on a fine night.

Flight.—Straight, with rather rapid beatings of the wings.

Migration.—The Cuckoo is a summer visitor throughout Europe. In this country it arrives about the middle of April, the old birds departing early in August, but the young remaining, occasionally to the end of September, or even to October in rare instances.

Food.—Insects, such as moths, butterflies, and caterpillars, especially hairy ones, which are rejected by most insectivorous birds, and in the removal of which the Cuckoo renders great service to man.

IN CONFINEMENT.—The Cuckoo has frequently been reared from the nest, but it has the great disadvantage of never learning to pick up its own food in captivity.

Habitat.—During its stay the Cuckoo is a common bird everywhere in the British Isles, and is an occasional visitor to the Faroes.

ABROAD it has been found throughout Europe and Asia, except some parts of Siberia. In Europe it breeds nearly to the extreme north. In Asia it is known to winter in India, Burmah, Ceylon, and the Philippine Islands; in summer it is met with in the other parts. It occurs in all South Africa in winter, is observed on migration in spring and autumn in Algeria, where also a few breed, as well as in the Canary and Maderia Islands.

Nest.—The Cuckoo builds no nest, but lays its eggs in the nests of other birds. There has not yet been a satisfactory theory advanced to account for this most curious habit, a habit, however, not peculiar to this species, but partaken of by nearly, if not quite, all the exotic members of this genus, and in America by a bird of

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1 KINGFISHER.

2,3,4. CUCKOO.

quite another family—the Cow Bunting. In this country the Meadow Pipit, Hedgesparrow, Pied Wagtail, and Reed Warbler are the species chiefly made dupes by this bird; the first is the one mostly selected upon moorlands and sandhills; the second in gardens and fruit districts; the third about quarries; and the fourth in the Fens. The nests of other birds are occasionally selected, and in this country Cuckoos' eggs have been found in those of the following birds:—

| | |
|----------------------|-----------------|
| Red-back Shrike. | Great Tit. |
| Spotted Flycatcher. | Ray's Wagtail. |
| Song Thrush. | Grey " |
| Missel Thrush. | Pied " |
| Blackbird. | Tree Pipit. |
| King Ouzle. | Meadow " |
| Hedgesparrow. | Rock " |
| Kobun. | Sky Lark. |
| Redstart. | Wood " |
| Stonechat. | Common Bunting. |
| Whinchat. | Reed " |
| Wheatear. | Yellow " |
| Sedge Warbler. | Chaffinch. |
| Reed Warbler. | Tree Sparrow. |
| Nightingale. | House " |
| Garden Warbler. | Hawfinch. |
| Blackcap. | Greenfinch. |
| Whitethroat. | Linnet. |
| Willow Warbler. | Bullfinch. |
| Wood Warbler. | Wren. |
| Grasshopper Warbler. | Tree-creeper. |
| Dartford Warbler. | Swallow. |

On the Continent Cuckoos' eggs have been found in the nests of some other birds.

Eggs.—The egg of the Cuckoo is remarkably small for the size of the bird, and very variable in colour. Fig. 1 is from an egg taken from the nest of a Meadow Pipit, and most of the Cuckoos' eggs I have seen from the nests of that bird have been of some shade of brown. But Messrs. Carter and Butterfield found the nest of a Meadow Pipit containing two eggs of the Cuckoo, both of which, as well as those of the Pipit, very nearly resembled the egg of the Pied Wagtail. In the northern portion of England dark eggs are most frequently met with, while in the south the reverse is the case. On the Continent the eggs of the Cuckoo are more variable

and blue eggs have not unfrequently been met with. Dr. Baldamus proposed a theory that Cuckoos lay differently coloured eggs in different birds' nests; that a Cuckoo, for instance, which lays blue eggs, lays them in the nest of a Hedgesparrow, or some other blue-egged bird. But whatever they may do on the Continent, the Cuckoos of this country do not strictly observe Dr. Baldamus' theory. Fig. 3 is from an egg taken from the nest of a Thrush by Mr. Porritt in Sherwood Forest, and is as unlike the bright blue eggs of that bird as it well could be, in fact, I believe that blue eggs of the Cuckoo have never been found in England, and it has been objected that the supposed Cuckoos' eggs upon which Dr. Baldamus based his theory may have been abnormally large eggs of the several species said to be mimicked.

Fig. 4 is from an egg also found by Mr. Porritt, upon Thorne Moor. It is very singular that this egg, which was found in a hollow depression of the ground, and without the slightest nest, should have been strongly incubated.

The number of eggs laid by the Cuckoo in a season is not known, but it is generally admitted, that the same bird lays one egg only in the same nest, and, although two are sometimes found in the same nest, it is supposed that they have been laid by two different birds, but the two found by Messrs. Carter and Butterfield, which so nearly resembled the abnormal eggs of the Meadow Pipit, in whose nest they were found, seems to indicate that they were laid by the same bird, and designedly placed in that particular nest. In many cases Cuckoos' eggs have been found in nests where the birds could not possibly have laid them, and, as on more than one occasion, a Cuckoo has been observed carrying its egg in its mouth, and even seen placing it in a nest, it is thought that it is the general habit of the Cuckoo to lay its egg upon the ground, and then carry it in its bill to a nest.

ALCEDINIDÆ.

Genus I. *Alcedo*, Linn.

ALCEDO—the Latin name.

The Kingfishers may be distinguished by the stout, long, pointed bill, the short legs, small feet, short wings, and the group to which the British species belongs, by the very short tail.

Only one species is found in Britain, but an American one has twice occurred in Ireland. No other species are native of Europe, but two occasionally visit the south-east.

About 130 kinds of Kingfishers are met with in all parts of the world, except the Arctic Regions, of which about 20 belong to the present genus, and these may be distinguished from the rest by the short tail, and by a furrow, which extends from the nostril to the tip of the bill.

These birds agree with the Woodpeckers, in the fact that the young are quite naked until the feathers begin to grow, never being clothed with down.

99. KINGFISHER.

Alcedo ispida, Linn.

ISPIDA—(L.), perhaps from *hispidus* = rough, probably in allusion to the rough nest made of fish-bones.

Size.—Length $7\frac{1}{2}$ in.; expanse $10\frac{1}{2}$ in.

Plumage.—**MALE**, bill blackish, the base of the lower mandible orange; top of head dark green, each feather with a pale greenish-blue bar; a similar patch of colour extends from the base of the lower mandible, and between this and that on the top of the head is a sienna patch from the bill, through the eye, to the ear-coverts; a patch beyond the ear-coverts white; scapulars, tertial, and lesser wing-coverts dark green, the latter with pale blue-green tips; flight feathers blackish, green on the outer web; middle of back to upper tail-coverts pale blue-green; tail dark blue: throat white, shading to sienna brown on the under parts; legs and toes red.

THE FEMALE differs from the male in the blue parts having a greenish tinge, and the breast slightly washed with blue.

IMMATURE BIRDS have the bill all black and shorter than in the adult, but the colour of the plumage is the same, except that it is duller in young birds.

VARIETIES are rare; one in Mr Bond's collection is splashed with white; it was shot near Weybridge some years ago.

Note.—The note is a faint piping "peep," or "te-et," generally uttered when the bird is alarmed.

Flight.—Very rapid, in a straight line, or following the course of a stream. The bird will sometimes hover when surveying the water for prey.

Migration.—It is thought that after the old birds have driven the young away to forage for themselves, the latter follow the course of a stream to the coast, where they remain through the winter, or cross to the Continent, returning inland the following spring. In hard frosts the old birds are also driven from their haunts, and have to seek subsistence in tidal rivers, or upon the coast.

Food.—Small fish, especially minnow and stickleback. The bird plunges overhead to capture its prey, rarely failing, and on reaching the surface again, flies off to devour it on some favourite perch; The bird strikes its victim several times upon its perch to deprive it of life, and then, turning it round in its bill, or tossing it into the air, re-captures it as it falls, and swallows it head foremost. The bones are cast up again in the form of pellets. The Kingfisher will also feed upon insects and their larvae, especially those of aquatic



KINGFISHER.



SWALLOW.

kinds, and upon the coast on crustaceans.

IN CONFINEMENT this bird is not bad to rear, if taken when about to leave the nest. At first it should be fed upon small fish, afterwards on raw meat, and should have a trough of water; this will not only serve as a bath, but also as a receptacle for small fish, when the natural habits of the bird may be observed. The cage should be cleaned out regularly, otherwise it soon becomes foul. In the autumn these birds are very pugnacious when several are kept together.

Habitat.—Fairly distributed over the British Isles, except the bleak Outer Hebrides, Orkney, and Shetland. It has not been met with in the Faroes. It delights in small streams shaded by trees, and is often found about mill-ponds. In manufacturing districts it has disappeared from many of its former haunts owing to the streams being poisoned.

ABROAD it is found throughout South Europe and North-west Africa, including the Canary and Maderia Islands, but in the latter it is only a visitor. It is met with in Egypt in winter. From the Mediterranean eastward to Turkestan the Kingfisher differs in having a shorter wing, and is called *A. Pallasi*, and in south-east Siberia,

China, Japan, India, and the Malay Archipelago, the wing is shorter still, and the bird is then called *A. Bengalensis*.

Nest.—The Kingfisher pairs early, and rears its brood in some kind of hole, generally one in a bank near a stream. The birds most frequently bore the hole for themselves, but they sometimes adapt that of a Sand-Martin. The site chosen is occasionally at some distance from any water, or even a hole in mason-work has been used for the purpose. When the birds excavate the tunnel for themselves, they cause it to slightly incline upward for a distance of from one to three feet, when a depressed cavity is formed, in which the nest, if such it can be called, is placed. This consists entirely of ejected fish-bones, worked, by the friction of the sitting bird, into the form of a nest. The inside of the chamber, and also of the passage leading to it, are always very foul from the slimy, decaying remains of fish, and very frequently swarm with maggots.

Eggs.—Eggs may be found by the end of April, or early in May, and vary in number from six to eight, or nine. They are nearly round, highly polished, and white, but before being blown have a delicate salmon tint.

HIRUNDINIDÆ.

Genus I. *Hirundo*, Linn.

HIRUNDO—the Latin name.

The species of Swallow are found all over the temperate and tropical parts of the world, and include about eighty species, the greater part of which may be safely placed under the present genus, but some authors, basing generic characters on very minute anatomical differences, have cut the Swallows up into a large number of genera, placing our three British species under as many generic names.

The members of the present genus may be known by the slender flat bill, which is very broad at the base, and with a wide gape; the long pointed wings; more or less forked tail; short legs; and small feet.

The species are all migratory in temperate countries, three of them being summer visitors to the British Isles, and two others to other parts of Europe. Three or four have occurred as accidental visitors.

100. SWALLOW.

Hirundo rustica, Linn.

RUSTICA.—*Rus* (L.) = the country.

Size.—Length $8\frac{1}{2}$ in.; expanse 1ft, 2 in.

Plumage.—**MALE**, bill black; eyes hazel; forehead and throat chestnut the whole of the upper parts and a band across the breast steel-blue; wings black, with bluish-green reflections and tail, two centre feathers black, the rest with a white patch on the inner web under parts white shading to reddish-buff at the vent; legs and toes black (fig. 1).

THE FEMALE differs in being rather duller in colour, the chestnut band on the forehead, and the steel-blue one on the breast narrower, and the outer tail-feathers shorter.

IMMATURE BIRDS have the colours less bright, the chestnut of the forehead extends in a line over the eye, the white on the tail-feathers is tinged with reddish, and the outer ones are much shorter than in the adults. The Swallows moulting in spring only, the adult dress is not assumed in this country.

VARIETIES are not rare, but in most cases are young birds. Mr. Marshall has one white and two pied in his collection. Mr. Bond has one adult pure white, and two pied; and of young birds—three creamy-white, one silvery-white, one light ash, and one creamy tinged with ash (fig. 3). Adult pied birds are rarest, and of these one (fig. 2) is given upon the plate from Mr. Whitaker's collection, and Mr. Gurney has two more.

The following are, by some, considered as races of this bird, while others look upon them as distinct species:—*H. gutturalis*, found in the Himalayas, China, and Japan, having the chestnut of the throat running through the dark band across the breast. *H. horreorum*—*tytleri* inhabiting East Siberia and North America, wintering in Burmah and Brazil, differs

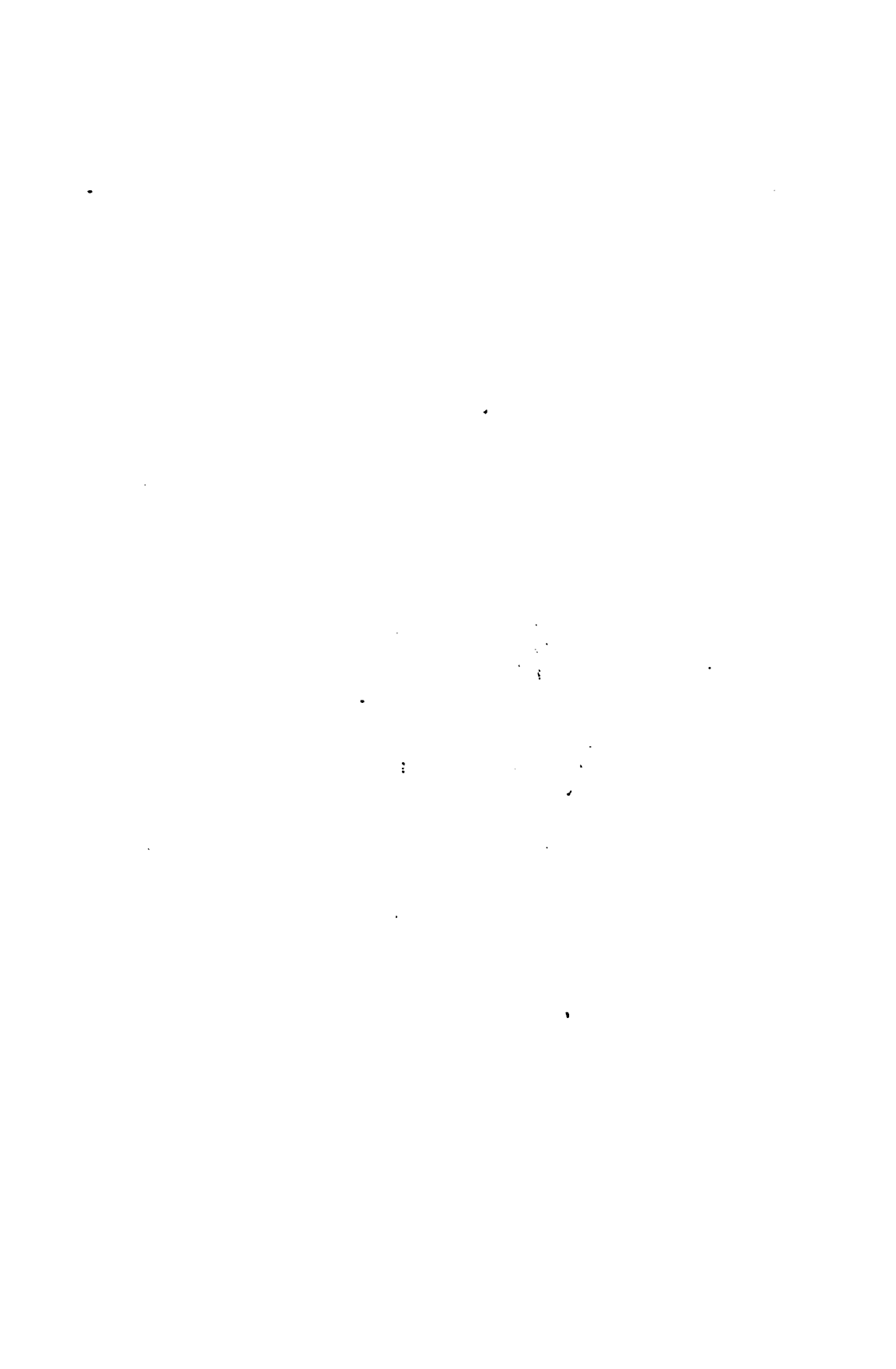
from the last by the under parts being pale chestnut. *H. cahirica*, found in Egypt and Palestine, has the under parts still darker chestnut. And *R. fontalis*, the Australian form is similar to the British, except that the band across the breast is almost absent.

Note.—The note is a loud “twhet,” repeated quickly when the bird is alarmed. It has also a sweet twittering song, which is uttered both when the bird is on the wing, or when at rest.

Flight.—The flight of the Swallow is so well known as to need no description. By far the greater part of the day is spent upon the wing—from early dawn as long as the birds can see the insects.

Migration.—A summer visitor to the whole of Europe, arriving in the south of England early in April, but not reaching Scotland before May. The first brood of young birds leave this country early in September, but the old birds and later broods stay till the beginning of October, or in some cases even to November, and instances are recorded of Swallows having been seen in the winter months. In the autumn large flocks form, and journey to Central or South Africa.

With regard to the hybernation of birds of the Swallow tribe, few, if any writers now give credit to the old notion that they descend into the bottom of ponds, and there sleep through the winter, but that birds have frequently been found, in a torpid or semi-torpid condition, chiefly in old buildings, cannot be disputed; but probably these have been birds which, by meeting with a supply of food in some favourable situation until late in the year, when the sudden change of weather has compelled them to seek a shelter which, from numbness, they have been unable to leave, and to suppose that they have sunk into a state of hybernation is no extra-







MARTIN.

gant hypothesis. Whether these birds would survive, and again awake with the return of spring, is a point which yet awaits proof. There is ample evidence that birds found in such a state in mid-winter, when exposed to the warmth of a fire, have revived and begun to twitter.

Food.—Entirely insects, and nearly all caught on the wing. When the old birds are collecting for the young, they do not return to the nest until the mouth is filled with flies, which are held by a sticky saliva.

IN CONFINEMENT.—The Swallows are not adapted for life in captivity, and failure invariably follows any attempt to confine these purely aerial birds. Their familiar habits, the close proximity of their habitations to those of man, renders such a course unnecessary, returning as they do to the same place every year, their habits can be watched, and by putting up suitable accommodation, they may be induced to nest almost wherever the observer wishes. A pair nests every year in the porch at the back entrance to Mr. Whitaker's house—Rainworth Lodge—in such a position that a tall man might put his hand into the nest at any time. Several cases are on record of Swallows nesting inside rooms in houses; one pair built on a picture frame, and a second pair, for two years, reared broods on the top of a disused bed-post, but the third year, the bed being in use and the window closed, they had to find fresh quarters (Nat. 1864, p. 132).

Habitat.—Universally distributed over the British Isles, breeding everywhere except the Outer Hebrides, and only on rare occasions in Shetland. Considerable numbers are reported as being seen some years in Faroes in May, which is very

curious, seeing that the Swallow does not arrive in the north of England much before the beginning of that month. Swallows frequently roost, when they are flocked for migration, in reed-beds.

ABROAD the Swallow is a summer visitor to North Africa, and the whole of Europe as far as North Scandinavia, and occasionally as far as Iceland, and has once been seen in Spitzbergen. In Asia it breeds in Asia Minor, Persia, Afghanistan, Turkestan, and the south-western portion of Siberia, wintering in Scinde and western India.

Nest.—Most frequently placed in a barn, cow-shed, or out building, upon an horizontal beam near to the top of the building. At other times the site chosen is the inside of a chimney, one either in use or not. Nests have been found down the side of a well or mine-shaft, in a hollow tree, or even upon the external branches. The nest is made of mud, intermixed with bits of dry grass or straw, and lined with finer grass and feathers. On the Continent, it is said, the nests are always half-cup shaped, and placed against a wall just under some projection, leaving an opening *all round* the top, in this respect differing from those of the Martin. This seems to be the plan followed in uninhabited parts, where the nests are placed against the face of cliffs.

Eggs.—The number vary from four to six. They are white, spotted with red-brown, chocolate, and ashy-grey, mostly round the large end (fig. 1).

VARIETIES.—The eggs vary much in the spotting, but fig. 2, from Mrs. Battersby's collection, and fig. 3, from Mr. Gregson's are unusual.

101. MARTIN.

Hirundo urbica, Linn.

URBICA.—*Urbs* (L.) = a city.

Size.—Length $5\frac{3}{4}$ in.; expanse 1 ft.

Plumage.—**MALE**, bill black; eyes

brown; upper parts—except rump and most of upper tail-coverts which are white—glossy blue-black; flight-feathers, and tail

blackish : under parts white ; legs and toes covered with white hair-like feathers.

THE FEMALE resembles the male.

IMMATURE BIRDS have the upper parts dull, with scarcely any blue gloss, and the tail is shorter and less forked, and sometimes the secondary and tertiary wing-feathers are slightly tipped with white.

VARIETIES.—Grey, silvery-white. or pale drab ones are not unfrequent. Mr. Bond has one pure white, and another white tinged with ash colour. Another white one is in Mr. Marshall's collection, and one is reported "with the whole of the quills of the wing and bastard wing pure white" (Zool. Aug. 1877).

Note.—The call-note resembles "twitiz" uttered both when the bird is on the wing and when alighted, but it has several notes which, especially when the bird is sitting on a branch or telegraph wire, breaks out into a kind of twittering song, less varied than that of the Swallow.

Flight.—The Martin has a very skimming flight, of a more onward character than that of the Swallow, not so rapid, and the bird alighting more frequently, especially during the process of nest-building.

Migration.—A summer migrant, arriving in the south of England about the middle of April, but not in the north of Scotland before the beginning of May. They leave the latter in September, and few are seen in England after the middle of October, but odd ones have been seen up to December. The young birds leave first, the old ones and second broods of young following. The winter is spent in Central Africa.

Food.—Entirely small insects. The

Martin is very useful in deminishing the swarms of gnats, and in the turnip fields renders service to ridding these plants of flea-beetle, aphides, and other enemies.

IN CONFINEMENT.—The remarks upon the Swallow apply equally to this bird.

Habitat.—As a summer migrant, equally distributed over the British Isles, except the Outer Hebrides, and Shetland where only a few remain to breed. It has been observed in the Faroes, but is not known to breed there. It frequents the vicinity of houses more than the Swallow, and therefore is more often seen in towns.

ABROAD the Martin migrates further to the north than the Swallow, being found in Europe up to latitude 70. It has been frequently observed in Iceland, and was once seen to commence a nest, which was abandoned before it was finished. Odd birds occur in the Canary and Maderia Islands, and it breeds in the north-western parts of Africa, Asia Minor, Palestine, and Persia ; is seen on migration in Egypt and Nubia, and winters in Central Africa, and occasionally in Turkestan and India.

Nest.—The nest is composed of mud, mixed with saliva to make it firm, and lined with straw, hay, or feathers. It is most frequently placed in the corner of a window, or under eaves, and is a quarter or half-quarter sphere with a circular hole at the upper corner. The natural site for the nest seems to be the face of a cliff, and numbers breed every year on Kilnsea Crag, and on the rocks at Flamborough Head.

Eggs.—Five or six is the usual number ; they are pure white, or with a pink tinge before blowing, and in size rather larger than those of the Sand-Martin (pl. xciii. fig. 5).

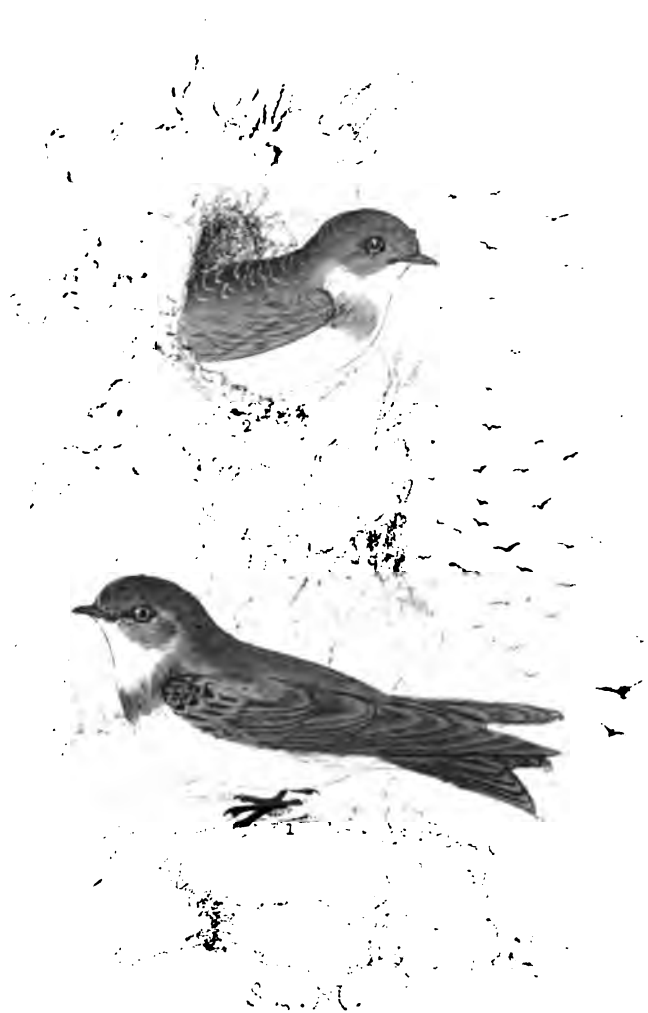
102. SAND-MARTIN.

Hirundo riparia, Linn.

RIPARIA.—*Ripæ* (L.)=a bank.

Size.—Length $5\frac{1}{4}$ in. ; expanse $11\frac{1}{2}$ in.

Plumage.—MALE, bill blackish ; eyes brown ; the whole of the upper parts, including wings and tail, and a band across



SAND-MARTIN.



SWIFT.

the breast, sooty-brown, rather darker on the crown of the head, round the eyes, and on the wing- and tail-feathers which have pale edges; throat and under parts white, tinged with sooty-brown on the flanks; legs and toes dark brown (fig. 1).

THE FEMALE resembles the male.

IMMATURE BIRDS have the feathers on the upper parts, tail-coverts, tertials, and wing-coverts tipped with pale buff, and the throat is of the same colour (fig. 2).

VARIETIES.—Mr. Marshall has a white specimen. One is recorded (Zool. Mar. 1877) of a pale yellowish-white, body tinged with grey and wing-coverts bordered with rust-colour, shot at Ringwood, Hants. Another is reported by Mr. Butterfield having the under parts white and the upper parts bluish-white. Mr. Bond has one pure white, one light buff, and one white tinged with ash-colour, and he says that some years ago he saw one with back, wings, and tail light bluish-ash, the rest of the bird being pure white.

Note.—The Sand-Martin has several notes, most of them very difficult to express in letters. The alarm note is harsh, and not unlike the word "share;" the call note somewhat resembles "wzit." The male also twitters a kind of song, generally when on the wing.

Flight.—Similar to that of the Swallow, but more jerking and irregular.

Migration.—A summer migrant, arriving in the south of England early in April, and in the north towards the end of that month, leaving again at the end of August, and the second contingent about the middle of September. The winter quarters of the Sand-Martin are probably in Central Africa.

Food.—Consists entirely of insects, especially such as reside near the vicinity of water, attacking as some people relate, larger species such as dragon-flies.

CONFINEMENT is not suited to these delicate birds, but by putting up a lime-

splashed wall, intersected by short lengths of drain-pipe leading into a bank beyond, they may be induced to take up their home in any suitable place.

Habitat.—The Sand-Martin is fairly distributed over the British Isles, a few breeding even in the Outer Hebrides, and in Orkney, but it is only a straggler to Shetland, and does not occur at all in the Faroes. On account of its breeding habits it is somewhat local, but generally occurs in large numbers. On its first arrival in spring, it frequents ponds and mill-dams, but after a fortnight's stay repairs to the localities suitable for breeding operations.

ABROAD it is a summer visitor to the whole of Europe nearly to the North Cape, and also to North Africa; in Asia it ranges from Palestine and Turkestan, through the southern half of Siberia, to North China, and Japan. It is also equally dispersed over the northern part of the American Continent, as far as 68° north lat. It winters in Mexico, Central America, and Brazil; and at this season is also met with in Transvaal, India, and Burmah.

Nest.—The nest, which is made of a few bits of hay or straw, or, near the coast, of seaweed, and lined with feathers, is placed in a chamber at the end of a hole excavated by the birds in the face of a bank, or soft sandstone cliff. The tunnel is the size of a rat-hole, and slopes upward slightly for a distance varying from 2 to 6 feet according to the consistency of the material. In some sandstone districts, as in Notts., the face of escarpments are riddled by the vast colonies of this bird. The holes vary greatly in their distance from the ground-level, on the banks of the Swale above Richmond I have seen the nests so low that they must have been in great danger of being flooded. Mr. Bond writes me word of two curious nesting places of this bird that have come under his notice—one of them at Brandon, in Norfolk, where the birds had bored into large heaps of sawdust which had laid for years and become solid-

ified; the other a high bur-wall near to Monmouth, the birds having worked their way through the mortar between the bricks into the soil beyond.

Eggs.—The number varies from four to six, generally more in the first than the second brood. They are pure white.

NOTE.—Since the account of the Martin was printed I have been informed that Mr. J. Whitaker, F.Z.S., has in his collection a pied variety of that bird. A figure of this will be obtained, and issued before the completion of the present volume.

CYPSELIDÆ.

Genus I. *Cypselus*, Illiger.

CYPSELUS.—(Gk.) Frequenting hollow places.

In general appearance, in flight, and in habits, the Swifts resemble the Swallows, but in internal anatomy their nearest relatives are the Humming-birds, being less nearly related to the Nightjars.

The Swifts may be known by the long, narrow, pointed wings, the short, forked

tail, the small bill and wide gape, the short legs feathered to the claws, the toes having only two joints, and all directed forward.

There are about 15 species in this genus, most of them somewhat resembling the British Swift in colour, but some are marked in various ways with white.

The eggs of all the species are white.

103. SWIFT.

Cypselus apus, Linn.

APUS.—*a* (Gk.)=without; *pous*=foot.

Size.—Length $7\frac{1}{2}$ in.; expanse 1ft. 6in.

Plumage.—**MALE**, bill black; eyes dark brown; body, wings, and tail sooty-brown, with slight green or purple gloss in newly moulted birds: under the chin is a white patch; legs and toes covered with black feathers (fig. 1).

THE FEMALE resembles the male, but is paler in colour.

IMMATURE BIRDS have the throat whiter, and the feathers of the wings and tail narrowly margined with buff.

VARIETIES.—Mr. Bond has a pied one in his collection, and he has seen one milk-white, and another silvery-white. A pied specimen is figured upon the plate from Mr. Whitaker's collection, the white extending to the whole of the under-parts.

The same gentleman has another less marked with white.

Note.—The note is a prolonged scream resembling "swee-ree," generally uttered when the birds are chasing each other at a low elevation.

Flight.—The Swift is purely a bird of the air, all day long gyrating in graceful circles, toying with each other in mid-air, or engaged in screaming chase along a village street.

Migration.—The Swift is a summer visitor to this country, arriving at the end of April, or in late seasons at the beginning of May. The young birds depart early in August, the old ones and late broods at the end of that month, but stray birds have been reported in October and November. They winter in South Africa.



NIGHTJAR.

patch two inches from the tip, and the two outer tail-feathers have a white patch at the tip; the under parts, and the under tail-coverts are buff, barred with blackish; legs feathered, toes brown (fig. 1).

THE FEMALE resembles the male, with the exception of being slightly darker in plumage, less warm in tint, and wanting the white spots on the wings and tail.

IMMATURE BIRDS may be distinguished by the shortness of the tail, and in the males by the patches on the wings and tail being smaller, and tinged with buff.

THE YOUNG IN DOWN are yellowish-grey, shaded with brown on the back and head.

VARIETIES.—One is figured upon the plate (fig. 3) from a drawing made by Mrs. Whitaker, from a bird killed at Holt, in Norfolk, and now in the collection of S. Wilkinson, Esq., of that place (Zool. xvii, p. 6779). Another similar, or else the same, is reported from the same locality (Zool. 1856, p. 5278; and 1858, p. 1242). Another pied bird is recorded (Nat. 1864, p. 149) from Melton Constable, killed in 1850. Mr. Bond has a pale drab variety, very similar to the Isabelline Nightjar (*C. Isabellina*), and a white specimen is in Mr. Marshall's collection.

NOTE.—The note, which is said to be uttered by the male only, is a jarring sound, prolonged for from one to five minutes, and repeated at short intervals. It is very loud, and may be heard at a distance of half-a-mile, raising and falling on two keys. This note is only uttered when the bird is perched; when on the wing a kind of whisking sound may be heard, which is probably produced by the action of the wings upon the air.

FLIGHT.—The Nightjar appears upon the wing at dusk, and probably continues through the night, at least on moonlight nights. It is a pleasing sight to watch the flapping, butterfly-like flight of this bird, as it flits noiselessly over the fern, or in and out among a few scattered trees, every now

and then snapping at its insect prey. The flight of this bird reminds one very much of that of an owl, and in many districts it is known as the Fern-Owl.

MIGRATION.—The Nightjar is a summer visitor to Britain, and is one of the latest to arrive. It seldom appears before the middle of May, departing again about the middle of September. Those that visit Britain probably winter in South Africa.

FOOD.—The food of this bird consists entirely of insects, the great majority of which are captured upon the wing, an act which is greatly facilitated by the large mouth, and by the long bristles with which each side is beset. The time of feeding is after dusk, and occasionally the bird may be observed sitting upon a branch, or upon a post or fence, and, after the manner of the Flycatchers, sallying forth after passing insects. This bird is extremely useful in its destruction of noxious insects, especially cockchafer and ghost moth, both of which it is very fond.

IN CONFINEMENT it seldom survives many weeks, and I believe never offers to feed itself.

HABITAT.—This bird is well distributed during its visits, over the British Isles, being found from north to south, but most abundant in the south of England. It inhabits ferny heaths, particularly those that are intersected by scattered trees, or bordered by fir plantations. It has the peculiar habit of perching lengthwise on a branch. It is not a gregarious bird, and therefore nowhere very abundant; but pairs return year after year to the same breeding place.

ABROAD it is generally distributed over Europe as a summer migrant; is also a summer visitor to south-western Siberia, Turkestan, Persia, Palestine, and Arabia. It is also seen in Egypt and Nubia on its passage north and south, and a few breed in Morocco. In winter it is met with in Algeria, and probably also in Central Africa, but its exact southern limit is not

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known.

Nest.—No nest is made, the eggs being laid upon the bare ground without any preparation. The colours of the old bird blend remarkably with the surrounding objects, it being almost impossible to detect the sitting bird, until, when almost trod upon, she takes wing.

Eggs.—Eggs may be met with in June. Two is the usual number, but on rare occasions three have been found in one nest; unless the first eggs be taken there is not more than one laying in a season. The

ground-colour is creamy-white, and the spots of olive-brown and ashy-grey; they are almost equally blunt at both ends. The number and size of the spots vary considerably in different eggs (fig. 1).

VARIETIES.—Fig. 2 is a variety with unusually large blotches, taken near Huddersfield, and kindly lent for figuring by Mr. Middlemost. Fig. 3 is from a drawing sent me by Mrs Battersby. Mr. Bond has seen eggs all dull white without any markings.

ORDER III. RASORES.

RASORES.—*Raso* = I scrape: birds which scratch for their food.

These are the true ground birds, feeding mostly upon grain and seeds.

The members of this order are greatly valued as articles of food, comprising, as it does, Pigeons and Game Birds. It is represented in Britain by a few species only.

COLUMBIDÆ.

Genus I. *Columba*, Linn.

COLUMBA—the Latin name for dove.

Pigeons are found in all parts of the world except the Arctic Regions, but are most numerous in Australia. There are between 300 and 400 species, some of which are beautifully decorated with bronze and metallic tints.

They are divided into various genera, the present one containing from 70 to 80 species, 5 of which are British, and one or two others have been reported as visitors. Members of this genus may be known by the bill being compressed in the middle, by having a soft skin at the base in which the nostrils are placed, the short legs, more or less square tail of 12 feathers, and

in the true Pigeons by the slaty-blue of the plumage, with metallic colouring on the sides of the neck.

The Turtle Doves form a section of this genus (by some considered as a separate genus) and differ from the typical species in their smaller size, the brown instead of blue colouring of their plumage, the absence of metallic tints, and in being confined to the Old World.

The eggs are pure white and two in number.

The young are at first covered with yellow down, and the old birds feed them by disgorging partly digested food into the mouth.

105. RING DOVE.

Columba palumbus, Linn.

PALUMBUS—the Latin name ; probably from *plumbum*=lead, in reference to the colour.

Size.—Length 1ft. 5in. ; expanse 2ft. 4in.

Plumage.—**MALE**, bill reddish, the skin at base whitish ; eyes straw-colour ; eye-lids orange ; head and upper parts slaty-blue ; a patch of white on each side of the neck surrounded by metallic reflections, primaries blackish with grey outer margins, and the first three of the greater and lesser wing-coverts white ; tail slaty-blue, with a dark bar at the end : breast rosy-brown, shading to bluish-white on the under parts ; legs and toes red.

THE FEMALE resembles the male, but is rather smaller and duller in colour.

IMMATURE BIRDS are without the white patch at the side of the neck, and the entire plumage is not so bright as in the adults.

VARIETIES.—Several pure white birds have been recorded—two are in Mr. Marshall's collection, and another, belonging to Mr. Alfd. Beaumont, is at present in my possession. Mr. Bond has one, bought in Leadenhall Market, which is all of a rosy-buff, and another much mottled with white and a light tail. One is figured on the plate from my own collection which is very pale on the upper parts. Mr. Gurney has two pied, and another slate-colour, the latter being alive at the time he wrote me word (Jan. 1883). One was shot near Hoveton, Norfolk, in 1861, of a cream colour, marked with slaty blotches on the upper parts (Nat. 1864, p. 149)

Note.—The coo of the Ring Dove, Wood Pigeon, or Cushat as it is more frequently called in the north, resembles the syllables "coo-roo, coo-roo" repeated many times. It is most frequently heard in the spring when the male is paying his addresses to his mate ; it is indeed a love

call, used by the male only during the breeding season.

Flight.—Strong, rapid, and straight, performed by strong decided flaps.

Migration.—Found in this country all the year. In autumn the numbers are increased by the arrival of large flocks from the North of Europe.

Food.—Grain of all kinds, young clover, young turnips, young corn, berries of all kinds, seeds of wild plants, acorns, beech-mast, fresh-water mollusks, and upon the coast seaweed. This bird does a vast amount of damage to crops ; the large flocks which assemble in autumn being a serious matter to farmers. From 600 to 800 grains of corn or barley, or 150 peas and beans have been taken from the crop of a single bird, and when we consider that the Ring Dove feeds several times in a day, and that flocks have been observed which have taken two days to pass, it is scarcely possible to calculate the amount of mischief they do. This is to some extent counterbalanced by the fact that large quantities are annually killed and sent to market, only, that the remuneration for such does not always fall into the hands of the persons whose crops have been ruined. In winter some good is done by the birds eating the seeds of buttercup and roots of couch grass.

IN CONFINEMENT it may be reared from the nest, or by placing eggs under a domestic pigeon. In some cases they have been known to settle when allowed their full liberty, or to recognise their owner after they have returned to a wild state.

Habitat.—Generally distributed over Britain, except the Outer Hebrides and Shetland, where it is only an occasional visitor. It is most abundant in Scotland, where of late years its numbers have very



DOVE

considerably increased. It frequents districts interspersed by wood and cultivation.

ABROAD it is resident throughout Cent. Europe, a summer visitor to the northern parts, and principally a winter visitor to the Azores, the Mediterranean Valley, and Asia Minor.

Nest.—The nest is placed in a fir, holly, or other evergreen; more rarely in

other trees or low bushes. One instance is recorded of its having been placed on the ground. It is merely a slender platform of sticks, through which, very often, the eggs may be seen.

Eggs.—The eggs are two in number, rarely three; they are pure white. The first are laid in April, or in early seasons in March, and there are usually several broods in a season.

106. STOCK DOVE.

Columba oenas, Linn.

ÆNAS—the Gk. name; from a word signifying ripening grapes, from the colour on the breast.

Size.—Length 1 ft. 1½ in.; expanse 2 ft. 2 in.

Plumage.—**MALE**, bill red-brown; eyes red; the whole plumage slaty-blue, darker on the back, except the breast which is slightly rosy, and the sides of the neck which are shining green and purple; greater wing-coverts tipped with black, forming a bar across the wing, there is also a black spot on the tips of the 3 innermost of the lesser wing-coverts; tail dark, with a light patch on the outer web of the 3 outside feathers (fig. 1).

THE FEMALE differs in being rather smaller and less brilliant in colour.

IMMATURE BIRDS have none of the shining gloss on the neck, nor the broken bar across the wing.

VARIETIES.—The only varieties that have come under my notice are two figured upon the plate from Mr. Whitaker's collection. Fig. 3 is from a hybrid between a Stock Dove and Domestic Pigeon, bred in Heywood Oaks, Notts.

Note.—The note is not so decided a "coo" as that of the Ring Dove, and has been described by Mr. Saunders as being more of a grunt.

Flight.—The flight is strong and very swift, the bird twisting in and out with

great dexterity among the trees as it darts through a wood.

Migration.—Resident, but in winter it leaves its breeding quarters and wanders a good deal in search of food, flocking together, or with Ring Doves or Domestic Pigeons, but darting off to the woods on the slightest alarm.

Food.—Similar to that of the Ring Dove but perhaps rather more addicted to grain.

IN CONFINEMENT.—This species has been reared by Mr. Harting.

Habitat.—Most numerous in the south and eastern counties of England, but has been found west to Scilly Isles. In the northern part of England and in Wales it breeds only sparingly, while from Scotland only odd birds have been recorded, one of them as far north as Orkney. In Ireland it occurs sparingly in the north-east. It frequents parks, especially those studded with old timber trees. It is to be met with commonly in Sherwood and Epping Forests, and I have also seen it breeding on the sandhills on the Lancashire coast, as well as in the park at Kirkcaldy, near Huddersfield, and in the rocks at Flamboro' Head. As is the case with the last species, the Stock Dove is steadily on the increase and extending its range.

ABROAD the Stock Dove is common in most suitable places throughout Central Europe. During the breeding season its range extends to South Scandinavia and

the Ural Mountains. It also occurs less commonly in S-E. Europe, Morocco, Algeria, and Asia Minor.

Nest.—The most favourite site is in the hollow of a decayed tree, the eggs being laid upon the accumulations of decayed wood. Sometimes a recess among thick matted ivy is used, or in dense fir foliage, where the leaves falling from the branches above accumulate on those below.

Sometimes the eggs are laid on the ground, as among furze bushes, where rabbits have made runs in and out. Upon rabbit warrens on the sandhills the deserted burrows are used. On the coast as at Flamboro' Head, and places on the south coast, a crevice in the cliff is selected. In none of these cases is any nest attempted.

Eggs.—Two is the usual number; they differ from those of the other Pigeons in having a slight creamy tint.

107. ROOK DOVE.

Columba livia, Gmelin.

LIVIA.—*Livida* (Gk.)=lead-colour.

Size.—Length, 1 ft. 2 in.; expanse 2 ft. 2 in.

Plumage.—This species differs from the last in having the bar across the wing complete, the blue much paler and clearer, a white rump, and the silky lustre of the neck larger in extent.

THE FEMALE differs in being smaller and duller in colour.

IMMATURE BIRDS have none of the green colour on the neck.

VARIETIES.—White and sand-coloured ones are reported by Edward ('Life of a Scot. Nat.') as having been observed on the Banff coast, and last year (1886) I was told by the fishermen at Flamboro' that a white pigeon, probably of this species, had been seen in the cliffs. In the northern parts of Britain a variety having the back and wing-coverts marked with black is frequent: this was described as distinct by Blyth under the name of *C. affinis*, a name is should retain as a variety.

Several local races occur in different parts of the world. Some of these may be distinct, or in some cases domestic pigeons which have resumed a wild state. In the Jordan Valley most of the birds have the rump grey (*C. Schimperi*); this form occurs westward, though less frequently, as far as Spain, while eastward the rump darkens,

and in Ceylon is as dark as, or darker than the back (*C. intermedia*). In Turkestan, and from thence to China, the tail has a white sub-terminal band (*C. rupestris*).

Note.—The "coo" of the Rock Dove is almost exactly that of the domestic pigeon, and is most frequently heard during the spring.

Flight.—The flight is very nearly resembled by that of the less fancy breeds of domestic pigeons. It is strong and rapid, the birds generally taking a long sweep at the edge of the cliff.

It may be as well here to state that this is the species from which all the domestic breeds of pigeons have been reared, which differ so much in constitutional characters. One breed—the homing pigeon—is very remarkable for its powers of flight, which has given it a peculiar value as a quick means of conveying messages from one place to another. A bird of this breed has been known to make a journey of 510 miles—Morconx to Brussels—in 12 hours and 25 minutes.

Food.—Like the other Pigeons this bird feeds upon vegetable matter and grain. It is stated by Saxby that it will feed for 10 months in the year almost entirely on roots of couch-grass (*Triticum repens*), which, if true, renders the bird of some service to the farmer. It also eats

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- 1. RING DOVE.
- 2. STOCK DOVE.
- 3. ROCK DOVE.
- 4. TURTLE DOVE.



ROCK DOVE.

small snails such as *Helix virgata*, and *Bulimus obscurus*. This bird drinks very frequently, and flocks have been observed to alight directly upon the water when other approaches have been difficult. This bird is very good eating.

Habitat.—Wild, rugged cliffs bordering upon the sea, and perforated by large caverns are the favourite haunts of this bird hence it is most numerous on the western side of Scotland, extending outward to St. Kilda, but it is met with in suitable places all round the Scottish coast, and in several places in England where it is sufficiently rocky. In Ireland it is found mostly on the western coast. It has been stated to breed in some places inland, but most of these cases are probably domestic

pigeons which have resumed a wild state. It is abundant in the Faroes.

ABROAD the Rock Dove is most frequent in the mountainous districts in South Europe, decreasing in numbers northward. It is also met with in the Atlantic Islands as far as St. Helena, in all the Mediterranean Islands, and through Southern Asia to North China.

Migration.—A permanent resident.

Nest.—Almost invariably placed in a cave, resting upon some projecting ledge. It is very alight, simply a few bits of dry grass, bents, or seaweed.

Eggs.—Eggs may be found by the end of March; they are pure white, rather round, and two in number (pl. xcvi, fig. 3).

108. TURTLE DOVE.

Columba turtur, Linn.

TURTUR—the Classic Latin name.

Size.—Length, 11½ in.; expanse 1 ft; 9 in.

Plumage.—Bill brown; eyes orange-red; a space around the eye light red; top of head bluish-grey; back greyish-brown; greater and lesser wing-coverts bluish-grey on the outer, and brown with a black centre on the inner ones; primaries brown; tail rounded, greyish-brown, all except the central feathers tipped with white, the white being largest on the outer ones: throat white; cheeks and ear-coverts pale buff; breast rosy; on sides of neck is a patch of black feathers with white margins; under parts dull white; legs and toes carmine red (fig. 1).

THE FEMALE differs in being rather smaller and less brilliant in colour.

IMMATURE BIRDS are without the conspicuous patches on the sides of the neck, and the upper parts are almost uniform brown (fig. 2).

VARIETIES.—Mr. Bond has seen two specimens mottled with white. A pied bird, perhaps one of the same, is at Horsham Court, but I have not, as yet, been able to obtain a figure of any of them.

Note.—The note is a soft but pleasant "coo," not so loud but sweeter than that of the Ring Dove.

Flight.—Very quick, and across an open space, or above the trees, is straight; among the trees the bird twists in and out with great agility.

Migration.—A summer visitor to Europe, arriving in Britain about the end of April, or early in May, departing again in September. Its winter quarters are in Central Africa.

Food.—Similar to that of the other species, but from its small size more addicted to small seeds.

IN CONFINEMENT this is an interesting bird. Its great affection for its kind renders it an object of love by all who have

kept it. Grain and seeds of any kind may be given, with a plentiful supply of fresh, clean water.

Habitat.—The Turtle Dove is fairly common in all the English counties northward as far as Derbyshire, and westward to Somerset and the borders of Wales. Beyond these limits it is only a straggler, but has bred in Durham, and does so sparingly every season in Ireland. In Scotland it is rare, but has occurred once as far north as Orkney: it has not been known to breed north of the Border. It is a rare straggler to the Faroes.

ABROAD it is common as a summer migrant to South and Central Europe, rarer in the North, but occurring as far as South Lapland. It is also met with throughout

North Africa, chiefly on migration, but a few are known to breed in Algeria. It occurs also in the Canary and Maderia Islands, and in Asia from the Mediterranean to Afghanistan, being replaced in the other parts by nearly allied but distinct species.

Nest.—The nest is very slight simply a few sticks made into a slender platform. It is placed on the branches of a tree, among thick foliage—as that of the fir—most frequently at a tolerable elevation, but sometimes in a low bush, or hedgerow, within a few feet of the ground.

Eggs.—These are laid about the third week in May, are two in number, and pure white (pl. xcvi, fig. 4.)

PHASIANIDÆ.

Genus 1. *Phasianus*, Linn.

PHASIANUS.—From the river Phasis in Asia, where the Common Pheasant was originally found.

The Pheasants are at once distinguished by the (generally) long graduated tail, by the male bird possessing a spur on each leg, and frequently a large red space round

the eye destitute of feathers.

There are about a dozen species known, inhabiting South and Eastern Asia, all remarkable for exceedingly bright and often metallic colours of the male.

They are essentially ground birds.

109. PHEASANT.

Phasianus Colchicus, Linn.

COLCHICUS.—From Colchis in Asia.

Size.—Male length 3 ft., expanse 2 ft. 6 in. Female, length 2 ft.; expanse 2 ft. 2 in.

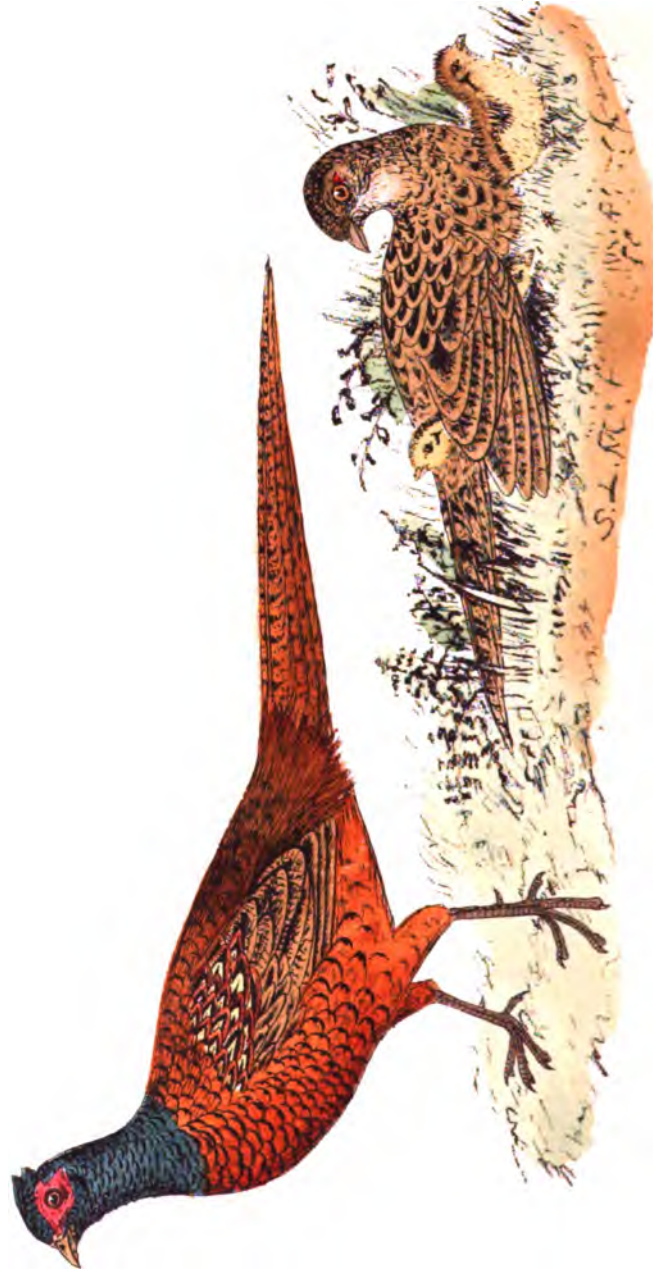
Plumage.—**MALE**, bill horn-colour; eyes reddish-yellow; a large space round the eye red; head and neck glossy blue-green; shoulders shining red-brown, each feather with a narrow black margin and spot at the tip; scapulars and back have

each feather buff in the centre, outside of which is a wedge-shaped black mark, and a broad coppery border; rump coppery, with green reflections; tail yellow-brown, with narrow black bars and coppery margins: under parts coppery, each feather with a rich blue-black margin (fig. 1).

THE FEMALE is sand-coloured, with darker and lighter markings; the feathers on the upper parts have black centres, that



TURTLE DOVE.



PHEASANT

colour surrounded with nut-shell brown and sand-coloured margins. There is only a small bit of the red behind the eye (fig. 2).

IMMATURE BIRDS resemble the female.

THE YOUNG IN DOWN are sandy-buff, with the top of head brown, and brown markings on the upper parts (fig. 3).

VARIETIES.—White and pied varieties are very common, and the general plumage is very variable owing to repeated crossings with foreign breeds, the most common of which is that resulting from a cross with the South China species (*P. torquatus*) which has a large white patch on each side of the neck, and the rump and wing-coverts pale bluish-green. Birds showing more or less of this breed are now so common as to outnumber the type in some places. A variety, with the usual copper replaced by silvery-drab, and known as the Bohemian Pheasant, is also becoming common in this country. The Japanese bird, with the under parts dark bronze-green has also been introduced and crossed with the common species. Hybrids between the Common Pheasant and the Black Grouse or Domestic Fowl are not rare, but those with Guinea Fowl or Turkey are of less frequent occurrence.

It is also of frequent occurrence with the Pheasant, as with some other birds, that females rendered barren by age or disease of the ovary, assume the plumage of the male. I have three such in my collection, one of which is very similar to a hen except the green head and neck. I am not aware that the opposite change has been recorded, but judging from what takes place sometimes in domestic fowls, it seems but reasonable to suppose that the cock may occasionally assume the garb of the hen.

Note.—The note is a crow, somewhat like "kor-ork," uttered mostly in the evening, or during a thunder storm.

Flight.—Strong, heavy, and in a straight line, the bird making a great noise when it gets up.

Migration.—A permanent resident.

Food.—Corn, seeds, grass, tender shoots of corn, clover, &c., berries, acorns, worms, insects, and small reptiles. Mr. Bond has counted 440 grubs of daddy-long-legs from the crop of a single bird, and on another occasion 1,200 wireworms were taken from another. Forest insects are also destroyed in large quantities, such as ants and oak spangles, the latter of which Mr. Bond has taken half a pint from a hen bird.

IN CONFINEMENT.—The Pheasant is a handsome bird for a large aviary, but is usually very shy. In all parts of Britain where it has been introduced it exists in a semi-domesticated state, having to be fed during severe weather, for which purpose nothing is better than maize or Indian corn.

Habitat.—The Pheasant is not an indigenous bird in this country, having been introduced from the East for the table, but there is no evidence to show when or by whom. It is recorded as far back as the middle of the 11th century, and it is supposed that it was brought by the Romans. Its first appearance in Ireland seems to have taken place between 1363 and 1589, and in Scotland about 1594. It now exists (though to a great extent under artificial circumstances) in every county in Britain.

ABROAD.—The original home of this bird is the swampy banks of the River Phasis, and other districts in Eastern Asia between the Caspian and Black Seas. It has, however, at one time or another, been introduced into every country in Europe, in each case successfully, except in respect to the Spanish Peninsular. In the northern parts it needs protection against its natural enemies and the severity of the weather. The ring-necked kind is found in Southern China, as before stated, and between there and the Mediterranean are found several species, or in some cases perhaps local races differing principally in the colour of the back and rump, and in being with or without the white ring.

Nest.—Very little nest is attempted, simply a hollow scratched in the ground and lined with bits of dry grass and dead leaves. The colours of the hen bird very much resemble the surroundings, making it difficult to detect her, until, ready to be stepped upon she glides off and the foot goes upon the eggs, making it hazardous for an inexperienced person to wander in a game preserve during the breeding season. In rare instances the Pheasant has

been known to make use of an old crow's nest, or squirrel's dray.

Eggs.—From 10 to 14 is the usual number, but occasionally over 20 have been found in one nest, probably when two hens have laid together, as they sometimes do. They are uniform greenish-brown.

VARIETIES sometimes occur pale bluish-green, or nearly white.

TETRAONIDÆ.

Genus 1. Tetrao, Linn.

TETRAO (Gk.) "A bird mentioned by Athemus and Pliny."—B. O. U. Cat.

The members of this genus may be known by the legs being covered with hair-like feathers. The wings are short and rounded, and the bill strong and arched at the top.

They nest and feed upon the ground, but many of the species also readily perch in trees. The eggs differ from those of the Pheasants in being spotted and blotched with shades of red and brown.

110. CAPERCAILLIE.

Tetrao urogallus, Linn.

UROGALLUS.—*Urus* (L.)=a wild ox; *gallus*=a cock.

Size.—Male length 3 ft. 4 in.; expanse 4 ft. 2 in. Female, length 2 ft. 2 in.; expanse 3 ft. 2 in.

Plumage.—MALE, bill horn-colour; eyes hazel; a red patch over the eye; head, neck, back, and under parts dark bluish grey, with fine black markings, the feathers on the throat and head elongated and pointed, and those on the vent, flanks, and the upper tail-coverts tipped with white; greater and lesser wing-coverts and scapulars brown, with fine black markings; front of neck and breast shining dark green (fig. 1).

THE FEMALE has the bill darker than

in the male; upper parts mottled with reddish-buff on a blackish-brown ground, many of the feathers, especially the scapulars and upper tail-coverts tipped with white; tail black, barred with reddish-brown; throat reddish-buff, the mottling of the back extending in a band below; breast nut-shell brown; under parts and under tail-coverts each feather buff with a broad black bar and white tip, the white covering the other colours in many parts (fig. 2).

IMMATURE BIRDS resemble the adult female, and the males do not attain the full dress until the third year.

THE YOUNG IN DOWN.—A figure of downy young is given from a specimen



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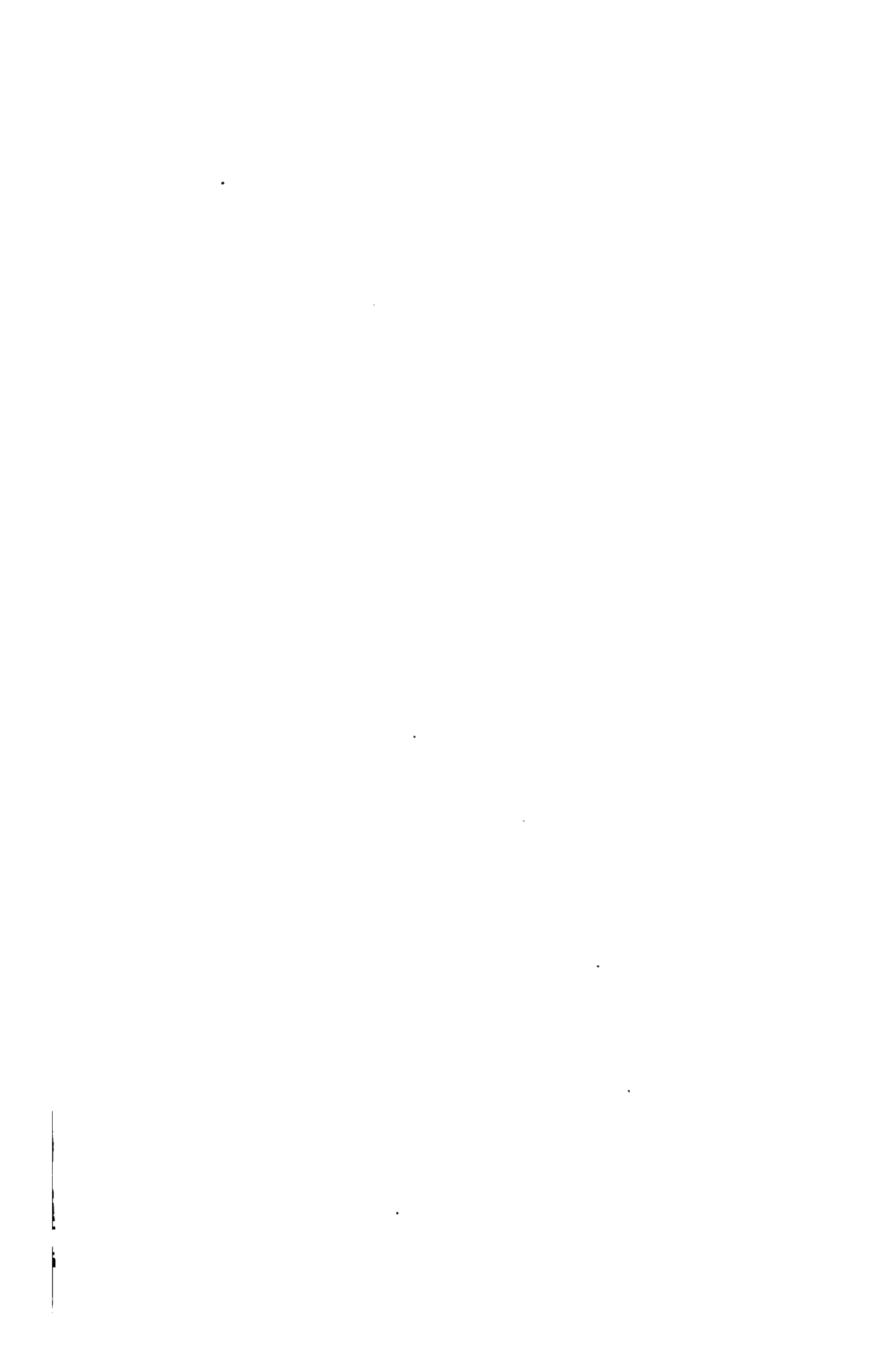


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1. PHEASANT.

2. CAPERCAILLIE.

3. BLACK GROUSE.





CAPERCAILLIE.

Mr. Whitaker's collection, bred in Harlow Wood, being the first Capercaillie hatched in Nottinghamshire within historic time.

VARIETIES.—Mr. Marshall has a pied bird in his collection, and a white female is recorded in Lloyd's 'Game Birds of Sweden.' Pale grey males with darker markings are said to be not unfrequent in Scandinavia, and the East Siberian form is is much greyer than European birds,

Hybrids between this species and the Black Grouse are of frequent occurrence. The male of this hybrid is a very handsome bird, somewhat similar to a Blackcock, but the wings generally mottled with grey, the neck with purple reflections, and the tail, although forked, not so much curved outward as in the male Blackcock; an uncoloured figure is given in the last edition of 'Yarrell.' Crosses with domestic fowl are also on record. As with the Pheasant, barren females of this species sometimes assume the plumage of the opposite sex; Mr. Bond has one in perfect male dress.

Note.—The note or call of the old male is very peculiar. In the forests where the birds frequent each old male has a "lek" or calling place. To this he repairs morning and evening, and seating himself upon a favourite branch of some tree, or an eminence, stretches forth his neck, spreads his tail, drops his wings, and erecting the feathers of his body commences his call resembling "peller, peller." In this call he seems to work himself up to great excitement, and when he has finished he is answered by females from various parts of the forest calling "gock, gock," after which they assemble at the lek, and the male descending from his perch, pays his addresses to each of them in succession.

Flight.—Strong and heavy, the male especially making a tremendous clatter as he raises from the ground.

Migration.—Resident in all the countries where it is found, the only migration to which it is subject being the changes from old forests to those of newer

growth; or from higher grounds, when covered with snow, to the warmer valleys.

Food.—Tender shoots of fir, buds of birch and bilberry, and berries of bilberry, cranberry, juniper, &c. The female seems to live mostly on berries: the crop of the one figured upon the plate contained half a pint of junipers.

IN CONFINEMENT.—This bird is often kept in captivity in Norway and Sweden, being fed upon oats, branches of fir, and berries, with plenty of water and coarse sand, which are frequently changed.

Habitat.—When the temperature of this country was considerably below what it is at present, when the pine forests extended much further southward, this bird probably found a home in every part of Britain. Within historic time indigenous birds are known to have inhabited Scotland and Ireland, but the only evidence we have of its being a native of England is, that bones have been found in caves in Teesdale and Cleveland. In the latter half of the 18th century the Capercaillie became extinct in Britain, and so far as is known not one of the original stock has been preserved. The causes which led to its extinction were probably the cutting down of pine forests, and the too heavy slaughter of the birds for table. It was re-introduced in 1827 by a pair being brought from Sweden, but the male only survived the journey to Braemar, but in 1837 another consignment, consisting of 16 hens and 13 cocks was brought over to Taymouth, which so far succeeded that in 1863 it was estimated that the numbers had increased to 2,000, and since then they have spread to all suitable parts of Perthshire, Forfar, and adjacent counties. Its re-introduction into England, although several times attempted, both in Devon, Norfolk, and Nottinghamshire, has not hitherto been attended with success. It inhabits young pine forests, to as high an altitude as the trees will grow, preferring southern slopes.

ABROAD it is common in all the pine forests of Northern Europe and Western Siberia, but in Eastern Siberia it is replaced by a smaller and distinct species. It is less common in Central Europe, on the southern slopes of the Pyrenees, and rare on the north side, but in other parts of France, as well as in Denmark it is extinct. Its occurrence in Greece and westward is a matter upon which opinions

differ. It has been reported as far as North-East Turkestan.

Nest.—The nest is simply a cavity scratched in the ground, among brushwood in some young pine forest.

Eggs.—Eggs vary from 6 to 12, and it is said that old females lay a larger number than young ones. They are pale buff, with yellowish-brown spots.

110. BLACK GROUSE.

Tetrao tetrix, Linn.

TETRIX.—(Gk.) "A bird mentioned by Aristotle."—B. O. U. Cat.

Size.—Male, length 1 ft. 10 in.; expanse 3 ft. 9 in. Female, length 1 ft. 5½ in.; expanse 2 ft. 7 in.

Plumage.—MALE, eyes brown, over which is a red wattle; the whole plumage glossy blue-black, except the tips of the wing-coverts and under tail-coverts which are white, and the outer web of the quill-feathers which is grey: the tail-feathers curve outward; legs covered with grey hair-like feathers; toes brown and bare (fig. 1).

THE FEMALE has the bill black; the whole plumage reddish-brown, each feather with a broad black band across the centre, excepting the under tail-coverts which are white; the tail is only slightly forked (fig. 2).

IMMATURE BIRDS at first resemble the females. The males begin to change in October, but do not attain their full plumage until the third year.

THE YOUNG IN DOWN are yellowish, with brown mottlings on the upper parts, running into three distinct stripes on the lower back: on the top of the head is a large chestnut patch, and several black markings on the forehead and behind the eye (fig. 3).

VARIETIES.—Mr. Bond has seen two

white male birds. Mr. Gurney has a pied one, and birds marked with white on the back and breast are said to be not unfrequent in the North of Europe.

Hybrids between this species and the Capercaillie have already been noticed when treating of the latter bird. Crosses have also frequently taken place between the Black Grouse and Pheasant; two of these are in the Newcastle Museum; two, male and female, are in Mr. Bond's collection, and several are noticed in Sterland & Whitaker's 'Birds of Nottinghamshire.' Hybrids between this species and the Red Grouse are very rare; one is figured (fig. 7) from Mr. Gregson's collection. The Black Grouse also frequently crosses with the Willow Grouse. Barren females often assume the plumage of the male, Mr. Bond has several such in his collection.

Note.—The note of the male bird during his play is very loud, and may be heard to the distance of a mile. It is said to consist of a succession of two notes consisting of a loud coo, followed by a hissing sound.

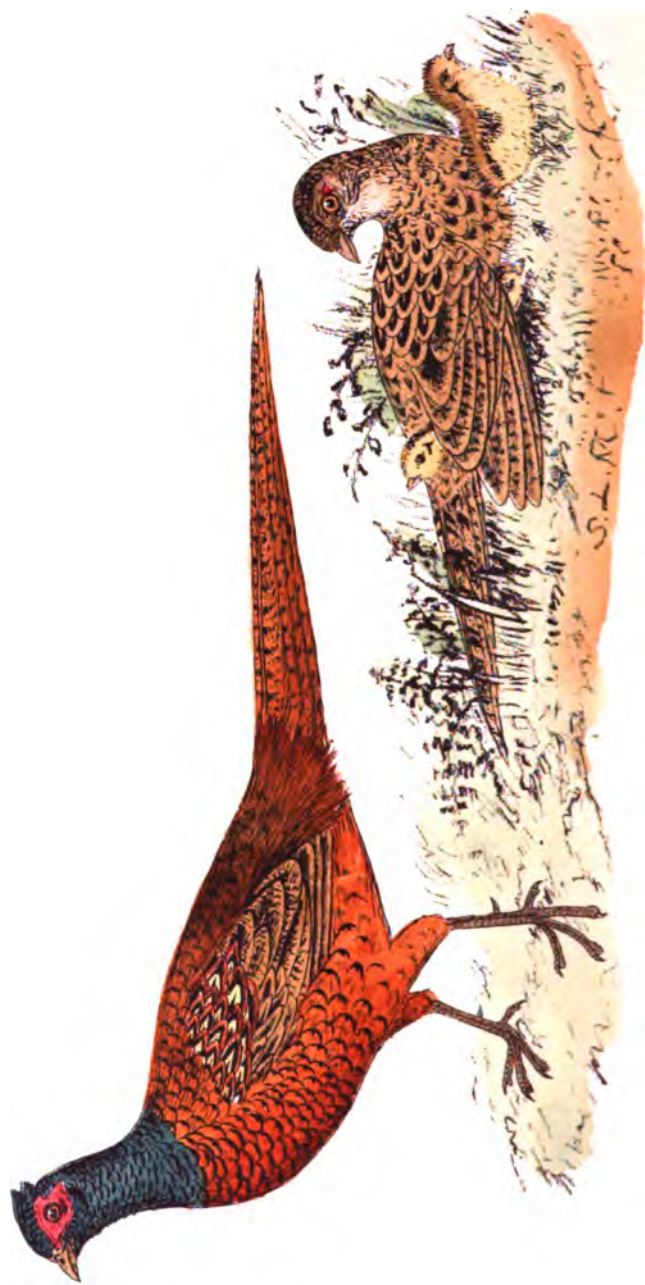
Flight.—The flight is quick and straight, but heavy.

Migration.—The Black Grouse does not leave its natural habitat during any part of the year, except when driven by circumstances to seek fresh supply of food.

Food.—This bird lives principally on



BLACK GROUSE.



PHEASANT.

colour surrounded with nut-shell brown and sand-coloured margins. There is only a small bit of the red behind the eye (fig. 2).

IMMATURE BIRDS resemble the female.

THE YOUNG IN DOWN are sandy-buff, with the top of head brown, and brown markings on the upper parts (fig. 3).

VARIETIES.—White and pied varieties are very common, and the general plumage is very variable owing to repeated crossings with foreign breeds, the most common of which is that resulting from a cross with the South China species (*P. torquatus*) which has a large white patch on each side of the neck, and the rump and wing-coverts pale bluish-green. Birds showing more or less of this breed are now so common as to outnumber the type in some places. A variety, with the usual copper replaced by silvery-drab, and known as the Bohemian Pheasant, is also becoming common in this country. The Japanese bird, with the under parts dark bronze-green has also been introduced and crossed with the common species. Hybrids between the Common Pheasant and the Black Grouse or Domestic Fowl are not rare, but those with Guinea Fowl or Turkey are of less frequent occurrence.

It is also of frequent occurrence with the Pheasant, as with some other birds, that females rendered barren by age or disease of the ovary, assume the plumage of the male. I have three such in my collection, one of which is very similar to a hen except the green head and neck. I am not aware that the opposite change has been recorded, but judging from what takes place sometimes in domestic fowls, it seems but reasonable to suppose that the cock may occasionally assume the garb of the hen.

Note.—The note is a crow, somewhat like "kor-ork," uttered mostly in the evening, or during a thunder storm.

Flight.—Strong, heavy, and in a straight line, the bird making a great noise when it gets up.

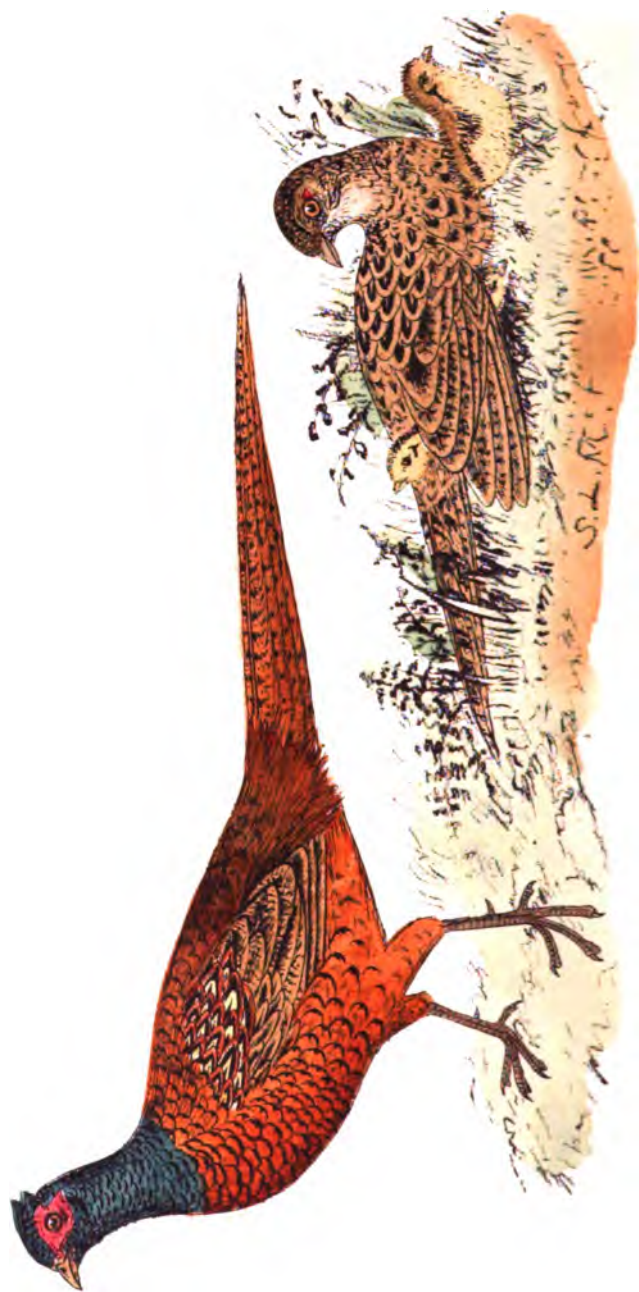
Migration.—A permanent resident.

Food.—Corn, seeds, grass, tender shoots of corn, clover, &c., berries, acorns, worms, insects, and small reptiles. Mr. Bond has counted 440 grubs of daddy-long-legs from the crop of a single bird, and on another occasion 1,200 wireworms were taken from another. Forest insects are also destroyed in large quantities, such as ants and oak spangles, the latter of which Mr. Bond has taken half a pint from a hen bird.

IN CONFINEMENT.—The Pheasant is a handsome bird for a large aviary, but is usually very shy. In all parts of Britain where it has been introduced it exists in a semi-domesticated state, having to be fed during severe weather, for which purpose nothing is better than maize or Indian corn.

Habitat.—The Pheasant is not an indigenous bird in this country, having been introduced from the East for the table, but there is no evidence to show when or by whom. It is recorded as far back as the middle of the 11th century, and it is supposed that it was brought by the Romans. Its first appearance in Ireland seems to have taken place between 1363 and 1589, and in Scotland about 1594. It now exists (though to a great extent under artificial circumstances) in every county in Britain.

ABROAD.—The original home of this bird is the swampy banks of the River Phasis, and other districts in Eastern Asia between the Caspian and Black Seas. It has, however, at one time or another, been introduced into every country in Europe, in each case successfully, except in respect to the Spanish Peninsular. In the northern parts it needs protection against its natural enemies and the severity of the weather. The ring-necked kind is found in Southern China, as before stated, and between there and the Mediterranean are found several species, or in some cases perhaps local races differing principally in the colour of the back and rump, and in being with or without the white ring.



PHEASANT

colour surrounded with nut-shell brown and sand-coloured margins. There is only a small bit of the red behind the eye (fig. 2).

IMMATURE BIRDS resemble the female.

THE YOUNG IN DOWN are sandy-buff, with the top of head brown, and brown markings on the upper parts (fig. 3).

VARIETIES.—White and pied varieties are very common, and the general plumage is very variable owing to repeated crossings with foreign breeds, the most common of which is that resulting from a cross with the South China species (*P. torquatus*) which has a large white patch on each side of the neck, and the rump and wing-coverts pale bluish-green. Birds showing more or less of this breed are now so common as to outnumber the type in some places. A variety, with the usual copper replaced by silvery-drab, and known as the Bohemian Pheasant, is also becoming common in this country. The Japanese bird, with the under parts dark bronze-green has also been introduced and crossed with the common species. Hybrids between the Common Pheasant and the Black Grouse or Domestic Fowl are not rare, but those with Guinea Fowl or Turkey are of less frequent occurrence.

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Note.—The note is a crow, somewhat like "kor-ork," uttered mostly in the evening, or during a thunder storm.

Flight.—Strong, heavy, and in a straight line, the bird making a great noise when it gets up.

Migration.—A permanent resident.

Food.—Corn, seeds, grass, tender shoots of corn, clover, &c., berries, acorns, worms, insects, and small reptiles. Mr. Bond has counted 440 grubs of daddy-long-legs from the crop of a single bird, and on another occasion 1,200 wireworms were taken from another. Forest insects are also destroyed in large quantities, such as ants and oak spangles, the latter of which Mr. Bond has taken half a pint from a hen bird.

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1. PHEASANT.

2. CAPERCAILLIE.

3. BLACK GROUSE.

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Genus II. *Perdix*, Linn.

PERDIX.—The Greek name.

Over 100 species of Partridges are found in all parts of the world, mostly tropical or sub-tropical regions, but some of the species extend to very near the Arctic Circle. They are absent from Australia. Only 3

species are found in Europe, two of which—one of them an introduction—are found in Britain.

They may be distinguished from the Pheasants by their smaller size, short tail, and the absence of metallic tints.

114. PARTRIDGE.

Perdix cinerea, Latham.

CINEREA.—Ash-coloured.

Size.—Male, length 1 ft.; expanse 1 ft. 8 in.; female rather smaller.

Plumage.—**MALE**, bill bluish horn-colour; eyes hazel, behind which is a small patch of red skin; top of head and breast bluish-grey, with fine, dark vermiculation; forehead, over the eye, ear-coverts, and throat yellowish-chestnut; upper parts mottled with shades of brown and greyish buff; the wing-coverts have a buff stripe down the centre of each; outer tail-feathers nut-shell brown; sides grey-buff with brown bars; under parts white with a chestnut horse-shoe patch on the lower breast; legs and toes blue-grey (fig. 1).

THE FEMALE is rather smaller and a little paler in colour, particularly the chestnut patch surrounding the beak, and the horse-shoe patch is not fully assumed until the third year. The colours of both sexes differ much according to the soil—on chalk and limestone being dull, while on gravel bright and rich.

IMMATURE BIRDS are less variegated in colour, being more of a uniform yellowish-brown with paler spots.

THE YOUNG IN DOWN are pale greenish-buff, marked on the upper parts with nut-shell and sooty brown (fig. 2.)

VARIETIES are common. Mr. Bond has two pure white, and I have seen several

others both white and pied. Buff and cream-coloured specimens also occur. A dark reddish variety named *P. montana* by Jardine has been met with several times in Scotland, and also another variety with the horse-shoe patch white. Figs. 3 and 5 are from specimens in the Liverpool Museum. The handsomest variety I have seen is in Mr. Bond's collection (fig. 4).

Note.—A shrill trill, very like the words "'tis sick," dwelling mostly on the first s. The note may be most frequently heard in a morning and evening, when the birds are feeding and calling to each other.

Flight.—Heavy. A covey of these birds make a great stir upon taking wing, especially if they be suddenly disturbed. They generally fly together, all keeping one pace, beating the wings rapidly until about to alight, when they are stretched out and the birds glide gracefully to the earth.

Migration.—The Partridge does not migrate except in the extreme northern countries. The birds shift about a good deal however locally, generally returning to the place where they were bred if not destroyed.

Food.—Tender leaves and shoots; in summer insects are added, the young feeding largely on ants; in the autumn the birds resort to cornfields to pick up the





parts replaced with yellowish-brown, and the black band round the white throat-patch is not continuous.

THE YOUNG IN DOWN are similar to those of the Common Partridge but greyer in colour; the one figured is from a specimen in the Liverpool Museum (fig. 2).

VARIETIES.—Fig. 3 represents a variety in Mr. Gurney's collection, killed at New Buckenham, near Norwich, and is a male. The owner kindly sent me a sketch of the bird, and I believe the same variety has occurred on the northern slopes of the Pyrenees. White birds have also been recorded.

Note—Intermediate between that of Partridge and Quail, having the three notes of the latter, but similar to the former in harshness.

Flight.—Prefers to escape by running: when flight is compelled by close pursuit the bird simply glides over a hedge or into a tree: stronger in the autumn.

Migration.—A permanent resident.

Food.—Tender vegetable matter, to which insects are added in summer, and in autumn grain, seeds, and berries.

IN CONFINEMENT this bird may be easily reared by placing the eggs under a domestic hen. The young birds treated as recommended for Common Partridge, and the handsome appearance of the old ones makes them attractive objects for an aviary, but they are somewhat pugnacious.

Habitat.—Not a true native, but has been in this country so long, and is at present established so firmly that its claim to a place in a History of British Birds

cannot be disputed. It was introduced about a century ago by the Marquis of Hertford and Lord Rendleshaw, who had a number of eggs hatched under domestic fowls and turned the young birds out in Suffolk. Since then these birds have so increased as to drive out the common species, and are now spread over all the eastern and south-eastern counties. The Red-leg has also been introduced into Yorkshire and some of the north-eastern counties, but does not seem to have flourished. Only one example has been met with in Scotland, and an attempt to introduce it into the Orkneys failed. It is to be met with in similar places to those frequented by the common species, as well as upon heathy tracts, especially those studded with low bushes.

ABROAD. Indigenous in S.-W. Europe—Spain, Portugal, S. France, Elba, Balearic Islands, and Corsica. In N. France, Belgium, Switzerland, N. and Central Italy it is rare; and is found as an introduction in the Azores, and Maderia Islands. Beyond these limits its place is taken eastward by the Rock Partridge (*P. saxatilis*), and southward by the Barbary Partridge (*P. petrosa*).

Nest.—A few bits of dry grass or dry leaves placed in a slight depression of the ground, generally in a field of standing corn, grass, or clover, or in the thick hedge bottom.

Eggs.—Eggs are laid about the end of April, and vary from 15 to 18. They are buffish-drab, with indefinite rust-brown spots.

Genus IV. *Coturnix*, Bonaterre.

COTURNIX.—The Latin name.

The Quails may be distinguished from the Partridges by their smaller size, by the first wing feather being the longest, and by the tail being short, rounded, and almost

covered by the tail-coverts. There are about 20 species inhabiting different parts of the old world, but only one of them is found in Europe.

116. QUAIL.

Coturnix vulgaris.

VULGARIS.—Common.

Size.—Male, length 7 in.; expanse 1 ft. 2 in.

Plumage.—**MALE**, bill horn-colour; eyes hazel; top of head brown, with a narrow straw-coloured streak down the centre, and a broader one of the same colour over each eye; upper parts brown, with 4 pale stripes often broken by the irregular arrangement of the feathers; wings brown, barred with lighter colour; throat buffish-white surrounded by two bands of dark brown, and a patch of the same colour under the bill; breast reddish buff, with paler streaks; flank-feathers barred at the edges, a broad pale central stripe, with a narrower dark one on each side; under parts buffy-white; legs and toes pale brown (fig. 1).

THE FEMALE differs in not having the dark bands on the throat, and in having dark spots on the breast (fig. 2).

IMMATURE BIRDS resemble the female but are rather more spotted, the black patch on the throat of the male not being attained until the second year.

THE YOUNG IN DOWN has the bill pale brown, yellow at base of lower mandible; top of head yellow tinged with brown, and 3 or 4 black streaks; upper parts reddish-brown with a black bar from the neck nearly to the rump on which is a black mark another black streak runs from each shoulder to the rump: throat and under parts white tinged with lemon, 2 or 3 black dots upon the cheek; legs and toes yellowish.

VARIETIES.—The only ones I have seen are two straw-coloured specimens, with the usual markings of a clay-buff, one of them in the York Museum, and the other in Mr. C. Waterton's collection in a shade of birds labelled "Obtained in Market at Rome" (fig. 3). British varieties are rare, but Mr. Gurney has recorded a white Russian spec-

imen, and Mr. Saunders has two from Spain which are very dark.

Note.—The call of the Quail is a triple note which many liken to "click-clic-lic," and which in Oxfordshire is rendered by the rustics to "twit-me-dick". The male only is said to possess this note, but there is another lower double note, which is used by both sexes. The Quail is most noisy in the morning and evening when in districts where it is common it may be heard in the fields of grass or corn.

Flight.—The flight is something like that of the Partridge, but quicker, low, and like that bird, often skims with outstretched wings when about to take the ground.

Migration.—A summer visitor arriving in this country in May, and departing again in October, but many have been observed in winter, and in the S.W. of Ireland where, owing to the influences of the Gulf-Stream, it is a very common occurrence for this bird to stay all the year round.

Food.—Seeds of weeds, insects, and slugs. The Quail renders good service to the farmer, and considering its flesh is very good eating it seems worth preserving.

IN CONFINEMENT.—The Quail is often kept in captivity, and is regularly on sale in the London Markets. It may be fed upon small seeds—hemp, millet, or canary, also seeds and tender tops of weeds.

Habitat.—In nearly all suitable localities throughout Britain, but rather unsettled in its appearance, and cannot be said to be very abundant anywhere, though fairly common in the south. It breeds regularly in Scotland especially on the Western side and in some of the islands as far as Lewis, and occasionally in Orkney and Shetland, and is a summer visitor to the Faroes. It breeds in Ireland particularly in the south.



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- 1,2. RED GROUSE.
3. PTARMIGAN.
4. PARTRIDGE.
5. RED-LEGGED PARTRIDGE.
6,7. QUAIL.

ABROAD it is a summer migrant as far north as Scandinavia and North Russia. In Asia it is found throughout South Siberia, Persia, Turkestan, Cashmere, China, and Japan. The European birds winter in South Africa, and the Asiatic ones in Burmah, India, South Persia, Mauritius, and Madagascar. In the Azores it is resident, but in the Valley of the Mediterranean and eastward to Cashmere it is observed principally on its spring and autumn passages, at which times it is so abundant that 160,000 have been taken in one season in the Isle of Capri.

Nest.—Merely a few bits of dry grass or similar material placed in a slight depression in a field of grass, corn, or clover.

Eggs.—Eggs may be found by the first week in June. They vary in number from 7 to 12, or more. The ground-colour is buff, with rich brown and reddish markings (fig. 6, pl. xcviij).

VARIETIES.—The eggs vary very much; fig. 7 represents an extreme form in Mrs. Battersby's collection, and Mr. Bond informs me that he has seen varieties with the ground yellow tinted with olive-green.

END OF VOLUME II.



GREAT RIVER PLOVER.

ÆDICNEMIDÆ.

Genus I. *Ædicnemus*, Temm.

(ÆDICNEMUS.—*Oideo* (Gk.) = to swell;
K'neme = leg.

In appearance and habits this genus of birds resemble the Bustards, but the bill is longer, and the lower mandible has a projecting angle in the middle. From the

true Plovers they differ in having the second wing-feather the longest.

About 11 species are known, and they are found in all quarters of the world with the exception of America north of Mexico, and the extreme north of the Old World.

117. GREAT PLOVER.

Ædicnemus crepitans, Temm.

CREPITANS.—*Crepito* = to crackle.

Size.—Male, length 1 ft. 5 in.; expanse 1 ft. 11 in.

Plumage.—MALE, bill, tip black, basal half greenish-yellow; eyes large and yellow; top and back of head stone brown, with a black streak down the centre of each feather; over the eye is a light streak, and another under it; back, wing-coverts, tertials, and upper tail-coverts pale brown, each feather with a blackish streak down the centre; flight feathers nearly black, the first and second having a white patch near the end; tail, basal half mottled with light and dark brown, the rest white, except the tips which are black, the middle feathers the longest; under parts, from the bill to the vent, creamy white, with a dark band from the lower mandible to the ear-coverts; breast tinged with brownish and streaked, as also on the belly by the fine blackish shafts of the feathers; legs greenish yellow (fig. 1).

THE FEMALE is similar to the male.

IMMATURE BIRDS resemble the adults, except that the markings are less distinct. At this stage the leg joints are much swollen, from which the name of Thicknee has been derived.

THE YOUNG IN DOWN has the upper parts pale stone-colour mixed with brown, a dark stripe runs down the centre of the

crown, and others along the back: under parts pale buff; legs bluish-grey (fig. 2).

VARIETIES.—Mr. Bond, of perhaps greater experience than any other living British ornithologist, never saw a variety of this bird.

Note.—Loud and distinct, and said to resemble the word "curlew" more so than that of the Curlew itself, from which fact in some places, as in Wiltshire and Dorsetshire, the present species is called the Curlew, and in Hampshire and some other places Stone Curlew. It is also called Thicknee, and Norfolk Plover.

Fight.—Rapid, with the legs stretched out behind; they also run very quick, and are remarkably shy.

Migration.—The Great Plover is principally a summer visitor to the east and south-east of England. Its stay extends from the beginning of April to the middle of October. Westward of Hants it is rare, but the occurrence of stray birds in Devon and Cornwall, and also in Ireland during winter has given raise to the idea that it is a regular winter visitor to these parts.

Food.—Worms, slugs, insects, small mammals, and small reptiles. This bird feeds principally in the evening, or during the night when the moon is clear.

Habitat.—The Great Plover is by

no means rare on the sandy flats of Norfolk and Suffolk. It also breeds regularly on most of the chalk downs south-east of Wiltshire, and occasionally or in limited numbers in suitable localities in Lincolnshire, East Yorkshire, and my friend Mr. Whitaker informs me that it bred last year (1887) on his estate at Rainworth Lodge, Nottinghamshire. One nest, at least, has been found in Worcestershire; it is an occasional visitor to West Yorkshire and Lancashire; one has been shot at South Shields, and another so far north as Fife, but that these were driven out of their usual course is proved by the fact that these birds were obtained during winter.

ABROAD this bird is found throughout South and Central Europe wherever the ground is suitable. It is rare in summer in Denmark, but does not migrate further north. In the Mediterranean valley it is mostly resident. It occasionally visits Maderia; breeds in the Canary Islands, Egypt, Asia Minor, eastward to Burmah, and southward to Ceylon. Northward it

visits Turkestan and West Siberia to breed. In South Nubia and Abyssinia this species is replaced by *Æ. inornata*, which differs in not having the upper bar across the wing.

Nest.—No nest is made, the eggs being laid in a slight depression scratched in the ground, with no lining whatever.

Eggs are laid about the middle of April, but have been found as late as September. They are mostly two in number, rarely three, and vary much, both in size, colour, and markings. They are different shades of stone-drab, or greenish-drab, spotted or lined with brown, green-brown, and greyish-brown. They often differ in the same clutch; the two figured, from my own collection, are, I believe, from the same bird. Although the eggs are laid on the bare ground they are most difficult to find, so nearly do they resemble the many stones which lay about the haunts of this bird, and, as pointed out by Seebohm, it is only by looking for stones in pairs that the eggs can be detected.

XCIX.



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